Mount Juktas, from Candia.

MINOAN LIME-PLASTER AND FRESCO PAINTING.

By Noel Heaton, B.Sc., F.C.S.

THE discoveries of painted plaster at Mycenæ have for many years drawn attention to the fact that the technique of painting on plaster employed in Roman and mediæval times was based on a tradition derived from remote antiquity, but it was not until the excavations in Crete, instigated and largely controlled by Sir Arthur Evans, resulted in the discovery of the Minoan civilisation, extending back almost to Neolithic times, that sufficient evidence became available to enable one to formulate any hypothesis as to the origin and course of development of this art.*

Last year, under the direction of Sir Arthur Evans, I made a careful examination of the most important sites, and followed up the evidence thus gleaned, by a detailed and exhaustive study of numerous fragments which I collected for the purpose, and of which I have preserved full data as to place and age.

Putting together the evidence thus obtained, the conclusion that one arrives at, expressed in general terms, is that the now well-known decorative paintings of the Palace of Knossos and elsewhere were executed in a manner closely akin to the buon fresco of the Italians, and that they represent the culmination of a long-continued development of the use of lime plaster; moreover, it is evident that the use of this material as the basis of a decorative process by the Minoans was subsequent to and derived from its development as a means of protection to their buildings from the weather.

The first crude beginnings of the use of lime plaster may be traced back in this district almost to Neolithic times, but it is practically impossible to form an idea as to the date of its first employment, owing to the confusion caused by the disturbance of early buildings by later work on the same site. But by the middle of the Early Minoan period we have ample evidence that lime plaster, of a comparatively crude type, was employed as a protective coating to the rubble masonry of which the buildings were constructed. At Knossos, very little work of this date remains; it was mostly cleared away in the construction of the first great palace in the Middle Minoan period. But I have found here and there fragments remaining on the walls of the earlier buildings, the foundations of which still exist outside the area covered by the

* In addition to the great Palace of Knossos, near Candia, excavated by Sir Arthur Evans, 1900-1910, many other sites have been examined in different parts of the island during the past ten years; the most important of these are the Palaces of Phæstos and Hagia Triadha, near the south coast, excavated by the Italian Mission; the ritual cave in Mount Dicte, excavated by Dr. Hogarth; the Early Minoan settlements at Vasiliki, the Late Minoan town at Gournia, the Late Minoan seaport at Palaikastro, and other sites to the east of the island.

main palace, and large quantities of small fragments are found broken up and used as rubble, embedded in the walls of the later buildings, and more particularly rammed into the floors.

At Vasiliki, however, several buildings of the Early Minoan period remain undisturbed by later alterations, and are preserved in excellent condition. Here abundant remains of plaster are found which may be taken as typical of the period.

Fig. 1 shows a section cut through a representative specimen of this plaster from Vasiliki. It will be seen that the plaster is over 5 cm. in thickness and that it was evidently put on in two coats, for there is a well-marked line of cleavage about 15 mm. from the surface—it is dirty yellow in colour and very hard and tenacious, affording an excellent protective finish to the friable sun-dried brick or loose rubble of which the buildings were constructed.

The composition of this plaster, considering its hardness, tenacity, and freedom from cracks, is rather remarkable. It contains only about 40 per cent. of carbonate of lime, the remainder being mainly silica and alumina;* it is difficult to reconstruct the exact mixture used in its preparation, but the large proportion of alumina and the fact that the silica contained (to the extent of nearly 40 per cent.) is not in the nature of sand, but is in a state of combination, points to the fact that the plaster was prepared by mixing lime with a clay of the type known to mineralogists as zeolite (consisting of hydrous aluminium silicate), the hardness being due not so much to the carbonation of the lime as to the subsequent combination between the two materials with the formation of silicates of lime and alumina.

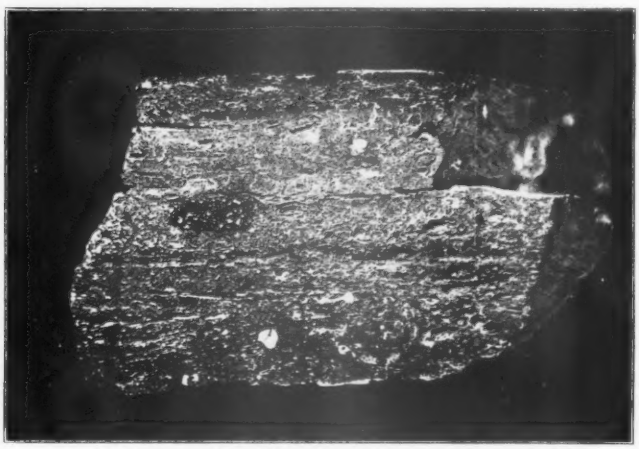


FIG. 1.—SECTION OF EARLY MINOAN PLASTER FROM VASILIKI.
(Exact size of original.)

The plaster was further strengthened by the addition of an aggregate consisting of small pebbles, fragments of pottery, &c., and a considerable proportion of chopped straw was also added, which was destroyed by the caustic lime, leaving well-defined cavities by which its presence can be identified, and in some cases even casts in carbonate of lime. This type of plaster is quite characteristic of the Early Minoan period, and although detailed examination of many of the fragments from Knossos, referred to above, in no case yields *absolutely* parallel results, the agreement is sufficiently close to warrant the assertion that a plaster of quite similar type was utilised there in the Early Minoan period.

As we pass from the Early to the Middle Minoan period the character of the plaster changes, more and more lime being used. Examination of a number of typical specimens

* For purposes of reference I give the complete analysis of the typical specimen illustrated:—

Soluble in hydrochloric acid (61·57 per cent.)	Calcium oxide (lime)	24·90
	Magnesium oxide	2·24
	Carbon dioxide	16·80
	Iron and alumina	17·23
	Sulphuric anhydride	0·37
	Soluble silica	0·03
Insoluble in hydrochloric acid (38·43 per cent.)	Insoluble silica	37·29
	Alumina, etc.	1·14

from the earlier palace of Knossos shows that the normal plaster used at this period was much lighter in colour, and, whilst firm and sound, is not so hard or tenacious—it is far more characteristic of ordinary lime plaster in fact. It consists on the average of 70 per cent. of carbonate of lime, the remainder being mainly clay with an admixture of fine pebbles and grit. The composition varies in different parts and the plaster is often traversed by streaks of varying colour indicating that the materials were not very well mixed—straw has disappeared from the mixture, and the plaster is altogether closer in texture.

This tendency to increase the content of lime becomes more and more pronounced as we pass through the Middle Minoan period, and the plaster at the end of the period (M.M. 3) is noticeably different from that of the earlier part (M.M. 1 and 2). By the time we reach the middle of the Late Minoan period, when the art and civilisation of the Minoans was at its zenith and the great remodelling of the Palace of Knossos was undertaken, we find that the craftsmen have come to the conclusion that the power of setting to form a plaster was mainly due to the material they obtained by burning limestone, and so used this material pure, without any admixture. By so doing they lose that hardness and tenacity which is obtained by the combination of the lime with the alumina silicates, but they obtain a perfectly homogeneous plaster of a brilliant white colour. The circumstances influencing the change are not far to seek; so long as the chief function of the plaster was structural—the facing of walls to resist decay—colour and texture were immaterial; but as the practice of painting on the walls developed, more and more attention would be paid to producing a surface suitable for decorative treatment. For this purpose fineness of grain, in order to prepare a perfectly smooth surface for painting, and brilliant whiteness in order to enable the designs to tell to the utmost, were desirable, and what the Minoan craftsmen were evidently striving after as their skill in decoration increased.

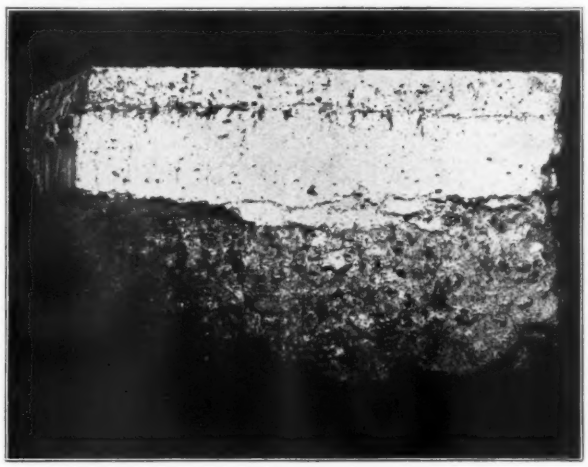


FIG. 2.—SECTION OF TYPICAL PLASTER OF THE "PALACE PERIOD" AT KNOSSOS (LM_2). (Exact size of original.)

In fig. 2 we have a section cut through a typical specimen of the Late Minoan plaster, together with the backing on which it was in some cases prepared. The difference in *colour* is not of course evident although the photograph gives some idea of the brilliant whiteness of this later material. Comparing it with fig. 1 the great difference in character and texture is evident.

The composition of this plaster, as deduced from the analysis of a large number of representative examples, approximates to that of a pure chalk lime, the content of carbonate of lime varying from 90 to 94 per cent.* In a preliminary account of this plaster,† I discussed at

* Here again it may be of use to give the exact composition of the specimen illustrated:—

Soluble (98 per cent.)	Calcium oxide	51·93
	Magnesium oxide	1·03
	Carbon dioxide	41·18
	Sulphuric anhydride	0·54
	Iron and alumina	1·81
	Alkali &c.	1·39
Insoluble (2 per cent.)	Silica	2·12

† *Journal of the Royal Society of Arts*, January 7, 1910.

length the question as to how it was prepared, and the general conclusion arrived at, from the evidence afforded by its chemical composition and its physical structure, was that nothing was employed in its production but caustic lime, unless some of the original limestone from which the lime was prepared was mixed with it in the form of powder before slaking. This view is further confirmed by the fact that a mile or so from Knossos, up the valley of the Kessoberos, is a huge cavern [fig. 3] in the hillside which marks the site of a Minoan quarry. Analysis of the limestone found in this quarry makes it clear that it was from here that the lime for the plaster was obtained, for the composition is too closely similar to the Late Minoan stucco to be accidental,* and the possibility that such a close agreement with a natural limestone should be reached by any mixture of materials is remote. It is certain that this limestone was quarried for some purpose, and we are justified in assuming that, in seeking for a material which would give them a whiter plaster than they had hitherto used, the craftsmen of the Palace period found that this limestone on burning gave them what they sought, and therefore used it exclusively.

FIG. 3.—ENTRANCE TO LIMESTONE QUARRY.

Exactly how they set about the preparation of such a magnificent plaster from this lime is a matter of conjecture—the traditions of their craft have perished with them. One may suggest, although there is no direct evidence whatever in support of it, that possibly their method of procedure was to keep the lime in a slaked condition for long periods,† and for use mix it with a proportion of the same limestone from which the lime was prepared, this not being burnt but merely reduced to a very fine powder.

USE OF THE LIME PLASTER IN BUILDING.

It will be clear from this brief survey of the nature and development of the plaster that its original use was constructional, and although in later times it becomes chiefly important as a material for decoration, it remained to the end of the Minoan era an essential feature of their architecture, as is evident when we consider the extent of its use in the later Palace of Knossos.

* The close similarity of composition may be seen by comparing the following analysis of a typical specimen with that of the Late Minoan plaster given above:—

Calcium oxide	52·09
Magnesium oxide	trace
Carbon dioxide	41·00
Sulphuric anhydride	0·20
Iron and alumina	2·18
Alkali &c.	0·98
Moisture	1·33
Silica	2·22

† It is conceivable that some of the curious shallow pits found in the floors of the galleries at Knossos may at one time have been used for preserving the slaked lime in good condition.

We must bear in mind that in Minoan architecture we find three principal types of construction, namely :—

1. Rubble and timber construction [fig. 4], used in earlier times and in the internal and partition walls in later times.

2. Gypsum masonry, as in fig. 5. The use of this is characteristic of Minoan buildings—it is a stone composed entirely of large crystals of calcium sulphate, which is found plentifully around Knossos.

3. Limestone masonry, as in fig. 6.

FIG. 4.—RUBBLE WALL (HAGIA TRIADHA).

The method of applying plaster to rubble walls, which obviously need such protection, is seen clearly in fig. 7: the wall, composed of irregular blocks of stone set in a matrix of clay, was first provided with a liberal coat of coarse plaster made of lime mixed with a large proportion of small pebbles and broken pottery. On this backing a first coat of fine plaster was applied in order to form a true surface, which was followed by a second and final coat of uniform thickness if the wall was to be decorated. The section in fig. 2 shows the whole structure, the total thickness of plaster being in this case about three-quarters of an inch. In some cases thin partition walls are found [fig. 8] composed simply of clay, supported and held together by the plaster, which forms a continuous casing over the whole surface.

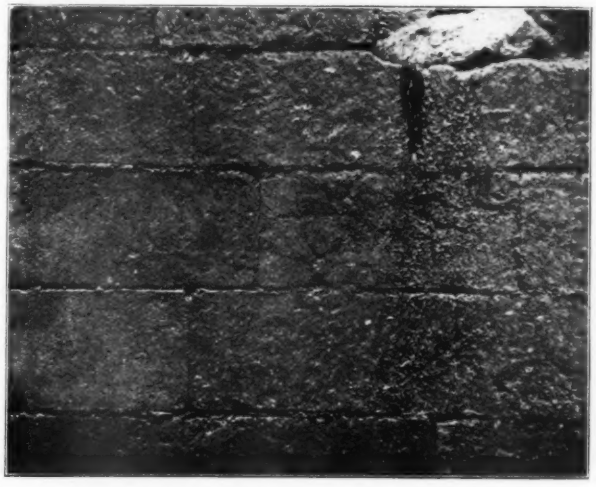


FIG. 5.—WALL OF SQUARED GYPSUM: THE ROYAL VILLA, KNOSSOS.

In the case of ashlar walls, which did not require to be brought to a true surface, the rough backing to the plaster was omitted, the plaster itself being laid direct on the stone. Gypsum walls are particularly well adapted for receiving the plaster, as a good grip is afforded owing to the exceptional structure of the stone, which consists entirely of large interlocking crystals with serrated edges. Where, as is sometimes the case, gypsum masonry was employed in conjunction with rubble walls, shaped blocks being used for the doorways, &c., the wall would be brought flush with the surface of the gypsum by means of the rough backing

and the fine plaster carried from one to the other, as seen in the diagram [fig. 9]. When one bears in mind the nature of gypsum it is evident that the facing of plaster was even more of a structural necessity than in the case of rubble walls. When protected by this plaster it forms a fairly satisfactory building stone on account of the ease with which it can be worked; without such protection it is unsuitable for any purpose but ornament, for it is so soft as to be readily scratched by the finger nail, and so soluble in water as to almost melt away when exposed to the rain. In a country like Egypt such a stone might perhaps be left unprotected, but in Crete a squared block of this stone will show appreciable denudation after a single season's exposure.

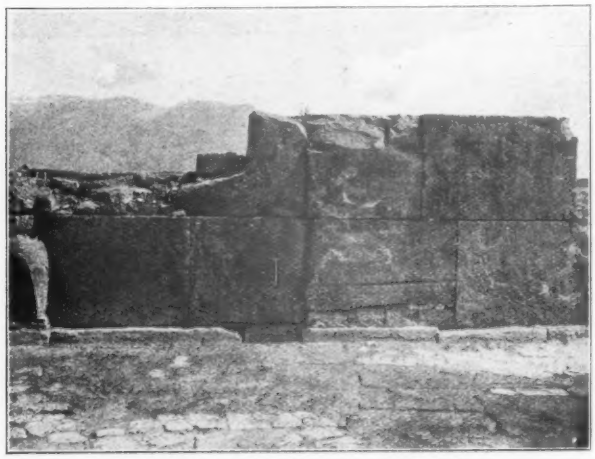


FIG. 6.—LIMESTONE MASONRY: CENTRAL COURT, PHAESTOS.

As a general rule the plaster as applied to gypsum walls is about half an inch thick, but in some cases, notably in the staircase of the Royal Villa discovered some little distance to the N.E. of the Palace of Knossos, it is the merest wash, about one-sixteenth of an inch.*

FIG. 7.—WALL OF THE THIRTEENTH MAGAZINE, KNOSSOS, SHOWING THE METHOD OF FINISHING RUBBLE WALLS WITH PLASTER.

Where limestone was employed in building the plaster facing was not so necessary. The Minoan builders, however, either did not realise the essential difference in the composition of the two materials or preferred the plaster surface to that of the dressed stone, for limestone walls were treated in identically the same manner as gypsum, with one or two exceptions referred to below. Very often the surface of the stone was scored over to give it a better key (as seen in fig. 6).

Exhaustive examination of the whole of the remains on the principal sites reveals ample evidence for reconstructing the condition of the buildings when in state of habitation, and it is clear that practically the whole of the building was finished in plaster.

That it was invariably used on internal walls one may accept without comment, but that its use should extend to the paving of floors is rather less obvious. In many places, however, the plaster can be traced down the

* "The Palace of Knossos," *Annual of the British School at Athens*, IX. p. 133.

wall and returning to the floor without a break (fig. 10). A noteworthy case is that of the "Corridor of the Procession" at Knossos, where a row of fine slabs of gypsum extends down the centre of the floor, the margins being paved with rough blocks of slate. The impression one obtains from seeing this in its present state is that the flooring plaster only extended over the margins, leaving a central footway of polished gypsum; yet there is sufficient evidence to prove that the plaster extended across the whole of the corridor, covering the polished gypsum as well as the rough paving.

FIG. 8.—REMAINS OF THIN PARTITION WALL OF CLAY CASED WITH PLASTER—S.E. QUARTER.
(The wall has been supported by modern brick piers to preserve it.)

The use of plaster on staircases can also be traced in many instances—an example is seen in fig. 11, from the Royal Villa at Knossos. The evidence as regards external walls is equally complete; traces of plaster are found adhering to the outer walls at Knossos, Phæstos, and Hagia Triadha. I have traced it all round the foot of the walls of the great central court at Knossos—these walls for the most part are only standing to the height of a few inches, but the cement fillet covering the joint between the paving stones of the courtyard and the walls is in position in several places, and between it and the wall the plaster can still be traced. Fig. 12 shows this clearly: here a portion of the cement fillet has been removed showing the several layers of which it is formed and the plaster running down to the foot of the wall behind it. This cement necessitates a word in passing: it is essentially a lime concrete, prepared from lime of practically the same composition as that used for the plaster, strengthened by the addition of coarse sand and pebbles. A similar material was generally used for paving the floors of corridors and light wells open to the sky, large smooth pebbles being mixed with the lime to form a durable and at the same time decorative pavement [fig. 13].

FIG. 9.—SECTION OF DOORWAY, THIRTEENTH MAGAZINE, KNOSSOS.
A, fine plaster. B, rough backing. C, rubble wall. D, gypsum block with rebate for door.

An exception must, however, be made to the statement as to the completeness of the evidence in the case of the walls of impluvia, or light wells open to the sky. Here the evidence is conflicting. In some cases, as in that illustrated in fig. 14, remains

of the plaster can be clearly seen on the walls, and at the foot of the wall it is found in position, between the edge of the "terrazza" and the stone. In other cases, as in the open court that lighted the grand staircase at Knossos, it is equally certain that the limestone masonry was left exposed, for one can trace the "terrazza" of the floor running up on to the wall, and not only so, but raised at the edge to form a fillet [fig. 15] : it is certain that if the wall had been plastered this fillet would have been made against it, and we should find remains of

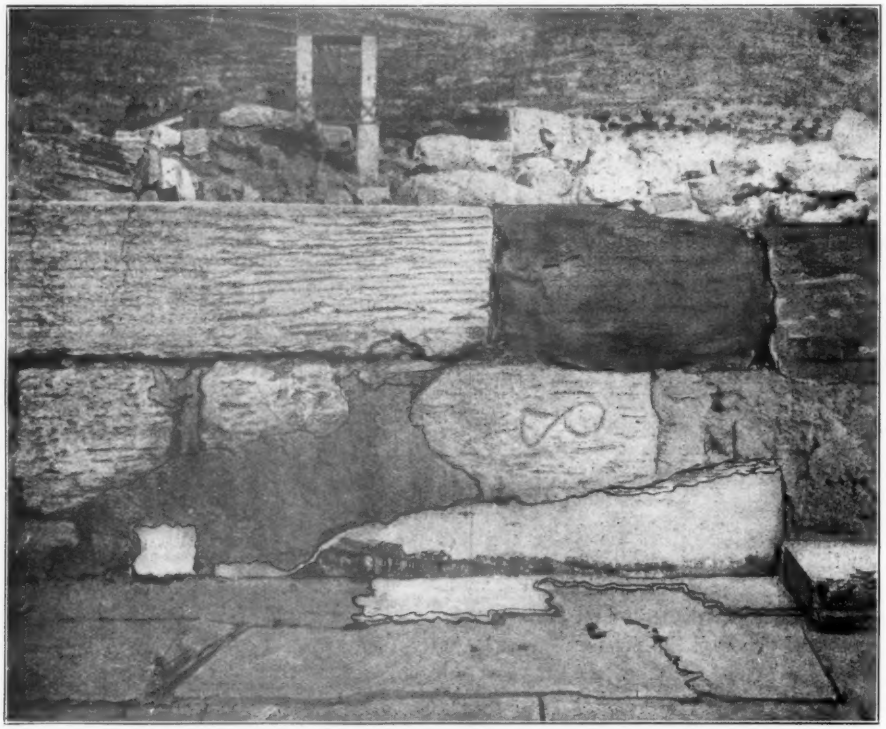


FIG. 10.—REMAINS OF PLASTER ON THE WALL AND FLOOR OF THE WEST PORTICO, KNOSSOS.
(The outlines of the plaster have been strengthened to render them more obvious.)

plaster at the foot as in other cases. Possibly this case is an exception—certainly the balance of evidence is in favour of the general practice having been to finish all walls of whatever character with plaster, and we may conclude that as regards the exterior of a Late Minoan palace, it presented an expanse of white plaster, relieved in places perhaps by flat washes of colour or some decoration, whilst the interior was finished in the same plaster, in places left white, but for the most part decorated with elaborate designs.

THE USE OF PLASTER IN DECORATION.

This brings us to the consideration of the more interesting aspect of Minoan lime plaster —its use as a basis for decoration. Lime plaster offers peculiar facilities for decorative treatment by reason of the fact that if a pigment merely mixed with water is applied to the surface as soon as the initial setting has taken place, it becomes firmly attached by the gradual transformation of the slaked lime into carbonate of lime.

This method of decorative painting, so extensively practised in mediæval times, especially by the Italians, who christened it "fresco" painting,* has certain qualities which cannot be altogether reached by any other method: qualities derived partly from the severe limitations the method imposes on the artist, and partly from the nature of the surface and the entire absence of anything in the way of a vehicle or medium, which in all other processes is necessary to attach the pigments to the surface. The fact that it was only necessary to wash pigment over the freshly rendered plaster in order to colour it permanently must have been discovered in very early times, for it is quite the usual thing to find the Early Minoan plaster coloured a uniform red by a liberal coating of pigment—the fragment from Vasiliki illustrated in fig. 1 is so coloured. This red is the only colour that has been found in Early Minoan work, and one can well understand that it would be the first pigment to be used, for it is what is generally known as red ochre, prepared by burning yellow clay. When they burnt their lime, they would notice that here and there spots of bright red would be developed, which would be traced to impurities in the shape of bands of yellow clay in the limestone. As far as evidence is available, for a considerable period this red pigment was only put on as a flat wash over the surface of the plaster, and rather as a finish to it than with any idea of decorative effect. The main purpose of the plaster was to protect the buildings, and the use of the red pigment has a certain advantage even in this connection as it renders the surface more uniform and slightly less absorbent. From the use of pigment in this way, however, the development of some form of decoration is a natural step. Other coloured substances would be tried, and it would be discovered that any pigment could be attached to the plaster if applied in the same way. By using the clay in its natural state yellow (ochre) would be obtained, and black would be readily prepared either from charcoal or, as was more customary, by powdering carbonaceous shale, whilst the lime itself could be used for white. The accumulation of a palette of such natural pigments is the general course of events in the development of painting amongst all primitive races.

FIG. 11.—PLASTER IN SITU (MARKED A) ON THE STAIRS OF THE "ROYAL VILLA," KNOSSOS.

The development of decorative painting in this way would naturally direct attention to

* The limitation of the term *fresco* to this method of working is not generally observed at the present time. Owing to the fact that fresco is most usually employed in connection with mural painting, the name has been gradually transferred from the process of working to include any form of mural painting, however produced. I propose, however, to limit the term strictly to a painting executed by applying pigments to a caustic lime surface, without the use of medium of any kind.

the possibility of improving on their original plaster, which was but ill-adapted to the purpose, and by adding more and more lime (to condense into a few words the development of centuries) they would gradually arrive at the pure lime plaster of the Late Minoan period. During the Middle Minoan period the palette also was supplemented by the introduction of a blue pigment, not like those previously used, a natural product, but a powdered blue glass prepared by fusing sand with soda, and coloured by silicate of copper. How the introduction of this pigment came about is a matter of speculation—it occurs quite early in the Middle Minoan period, when however it was only employed to a limited extent—probably because it was a costly material at that time. With the growth of decorative painting in later times, however,

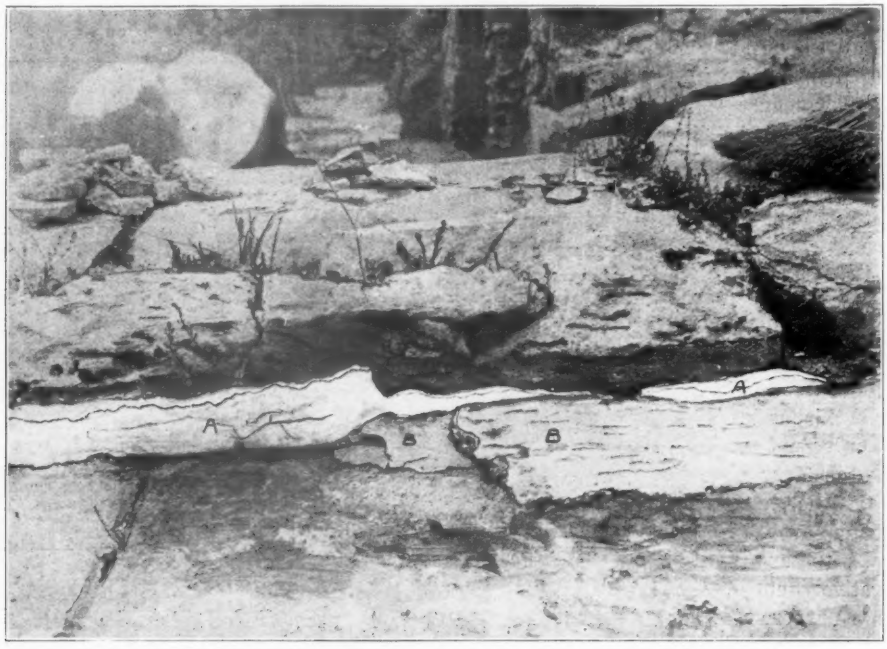


FIG. 12.—FOUNDATIONS OF THE WEST WALL, CENTRAL COURT, KNOSSOS, SHOWING THE PLASTER (A) BENEATH THE CEMENT FILLET (B).

it comes more and more into prominence, and its extensive use is a characteristic feature of Late Minoan designs. Its manufacture was also evidently improved in course of time, for the pale greenish blue of the Middle Minoan work bears no comparison with the beautiful colour found in later times. Its long-continued use argues local origin, but it is so closely akin to a pottery glaze as to suggest having been derived from this source, and such vitreous materials are not at all characteristic of Minoan art until quite late—glass, in fact, as a material was scarcely known to the Minoans. On the other hand we find such a blue glass used in pottery from very early times in Egypt, and from the XIth dynasty onwards it was extensively used as a pigment: every stage of its manufacture, proving conclusively that it was manufactured in Egypt, has been traced. We know that from quite early times there was considerable intercourse between the two countries, and that the Minoans exported their red pigment to Egypt,* and in the absence of any evidence as to its manufacture in Crete, it is reasonable to suppose that the blue may have been imported from Egypt in exchange.

* Flinders Petrie, Abydos, ii. 38.

We have already seen that in the Late Minoan period fresco painting was developed to the extent of becoming the characteristic art of the period. Of the peculiarities of Minoan design it is beyond my province to speak,* but I may perhaps indicate the extent to which the art was practised at Knossos when the Minoan civilisation was at its height, as revealed to us by a detailed examination of such fragments of the vast palace as have survived its fall and the subsequent burial of its remains for twenty-five centuries.

There is every reason to believe that, with the possible exception of some of the external walls, the plaster was never left entirely plain, although in some of the less important apartments the decoration was extremely simple. In the "magazines," for example, the only decoration found is a series of bands of red—a broad band 85 cm. from the floor, separated by its own width from a narrow band (seen in fig. 7), and then another similar pair of bands near the ceiling, the remainder of the surface being left in its natural white. This simple decoration is found throughout the labyrinth of rooms surrounding the "magazines," and in the similar areas in the eastern portion of the palace, but in all the more important rooms the surface is entirely decorated in a manner similar to that found centuries later at Pompeii—a characteristic arrangement is that of panels of elaborate figure subjects or symbolical designs, set in a background of deep red. This red background seems to have formed part of the scheme of decoration in the more important halls reserved for ceremonial purposes, and some symbolic meaning was evidently attached to its use. It is probable that this may be connected with the fact that red was the first colour to be used in connection with plaster decoration, and its use, handed down from time immemorial (for at least a thousand years elapsed between the production of the fragment of plaster seen in fig. 1 and that in fig. 2), became associated with the traditions of the race.

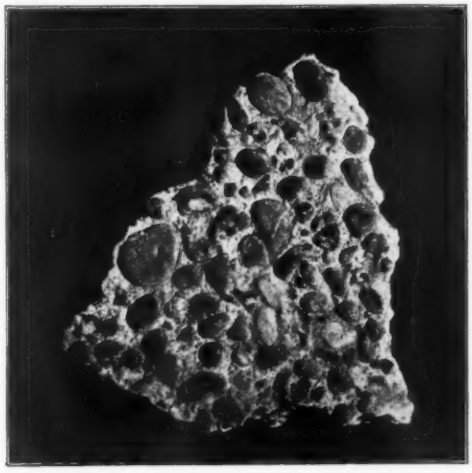


FIG. 13.—TERRAZZA OF LIME CONCRETE, USED FOR PAVING CORRIDORS. (Exact size of original.)

In what is known as the Domestic Quarter of the palace, however, devoted to the Royal apartments, such as the area surrounding the Hall of the Colonnades, a lighter background was the rule, and very often, as in the Queen's Megaron, a frieze of characteristic spiral design was carried round the walls. In such places as porticos again, the surrounds of the subject panels were decorated to imitate slabs of variegated marble. This is the case, for example, in the antechamber to the Throne Room and the great portico of the West Court. In the latter case the painted surface was mostly burnt away at the time of the conflagration, leaving the white body of the plaster exposed, but remains of it can be traced at the foot of the wall as shown by the dark space in the illustration [fig. 10], marking where the surface was protected from the fire by fallen débris. At Knossos there is no indication that elaborate designs were painted on the floor as was common in later Mycenæan times, but the prevailing colour was the natural white of the plaster, with a broad red band running round about a foot from the walls and the centre of the floor arranged chequerwise in red and white, or black and white.

* A detailed description is given in "Painted Plaster Decoration at Knossos" by Theodore Fyfe, JOURNAL R.I.B.A. December 1902.

Mention must also be made of the fact that the decorative use of the plaster was not confined to painting, great skill being also shown in modelling it before setting to form figures in low relief which were subsequently painted in fresco. These moulded reliefs—life-size models of men and bulls—are some of the finest remains of Minoan art, and must have added immensely to the decorative effect of the plasterwork. They are eloquent testimony to the mastery over the material possessed by the Minoan craftsmen.

This, however, is somewhat of a digression. Returning to the technical aspect of the question, I have stated more than once that one of the great points of interest in connection with the decorative paintings of the Minoans is their bearing on the origin and early development of fresco painting. Not to describe in detail the long series of observations which have led me to assert that fresco technique was almost universally employed in the execution of these paintings, they may be summarised thus :—

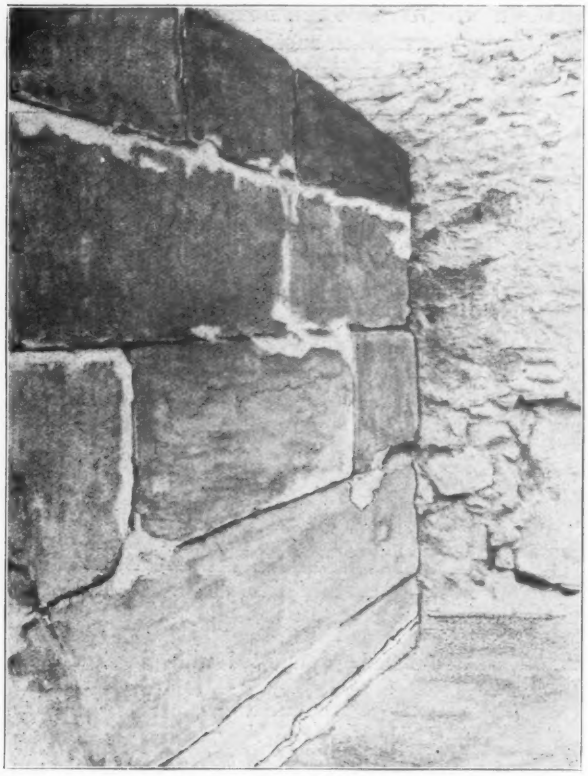


FIG. 14.—REMAINS OF PLASTER IN POSITION ON WALL OF LIGHT WELL: CORRIDOR OF THE DAYS, KNOSSOS.

1. Careful observation generally reveals places where the surface of the plaster has been dragged up by the brush in laying on the pigment, and sometimes this is apparent on the most casual examination, as in fig. 16.

2. The dimensions and broad outlines of the design are often set out on the plaster by incised lines, not scratched by a knife on the dry plaster, but made by a blunt point passed over the still soft surface: sometimes it can be clearly seen that straight lines have been made by a stretched string.

3. A thin section examined under the microscope shows that there is no sharp line of demarcation between the painted surface and the body of the plaster, one merging into the other.

4. No medium can be detected, and the painted surface stands prolonged treatment with water, caustic alkali, alcohol, ether, toluene, and other solvents, either hot or cold, without injury.

5. A fragment of the painted surface treated with dilute hydrochloric acid disintegrates with effervescence, the carbonate of lime which binds the particles of pigment dissolving, leaving them in a state of powder.

These facts, taken together and in conjunction with the character of the work as regards design and execution, leave no room for doubt that fresco was the general method of working. At the same time it is quite probable that distemper painting was occasionally employed as an accessory. This was the recognised method of painting in Egypt, and as there was evidently

considerable intercourse between the two countries it is highly probable that it was known to the Minoans. But they can only have employed it occasionally, as a sort of makeshift, for amongst the large number of specimens examined I have only come across one instance of its use. This was on a small fragment which attracted my attention by its exceptional nature, which was explained when I found that some of the colouring of the surface could be washed off, leaving the basis of fresco untouched.

There are, it is true, one or two difficulties in the way of accepting this hypothesis of fresco painting. The huge scale and detailed design of some of the paintings, and the absence of any indication of the thin final coat or "intonaco" characteristic of mediæval work, and of any trace of the joins showing where this "intonaco" was put on fresh for each day's work, is worthy of comment. A more frequent criticism, however, is that it is quite common to find one pigment painted over the top of another—ornament being painted on a wash of colour, or the outline of a figure on a background, for instance, which seems at first sight to point to execution in some form of distemper or tempera on the dry plaster. These facts, however, are not altogether inconsistent with the use of fresco, when one bears in mind the essential difference between the Minoan work and that of Roman or mediæval times—the enormous thickness of the plaster, often over three-quarters of an inch, instead of the one-eighth or less characteristic of later times. This would result in there being a reserve of the soluble calcium hydrate available to fix the pigments for a very much longer period than one is accustomed to regard as possible, and allow of somewhat more deliberate work. The slow setting incidental to such a thick body of plaster would also permit this soluble hydrate to penetrate and weld together superimposed layers of pigment: repeated examination shows that where the design is built up in this way the different layers of colour penetrate one into the other and are bound together only by a film of carbonate of lime.

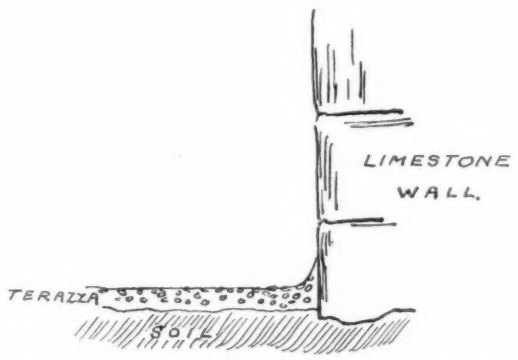


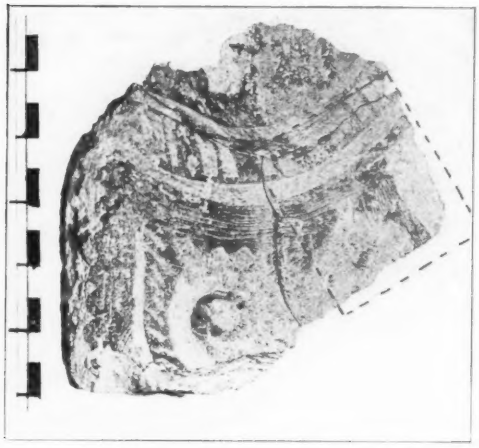
FIG. 15.—DIAGRAM SHOWING STRUCTURE OF FLOORING OF LIGHT WELL OF HALL OF COLONNADES, KNOSSOS.

But probably the explanation lies in their method of working. From a careful study of the designs, both of the remains *in situ* and the restored drawings made by M. Gillieron, it is clear that where figure subjects were to be included in the decoration of a room these were arranged in panels, the remainder of the wall space being either left white, or more usually painted in a flat wash of red, with horizontal borders of red and white bands, or perhaps a frieze of the characteristic spiral design.

This simple work would be executed as the plaster was put on, in the same way as the simple decorations of the "magazines" and other unimportant rooms—probably by the plasterers themselves, or at any rate inferior workmen, the panels to be occupied by the figure subjects being left unplastered. These spaces were then filled in and painted by decorative artists, the decoration of each panel being proceeded with immediately the plastering was finished, the artist working with a rapidity and certainty born of constant practice and long-established tradition.

That this was the method of working is indicated by the general style of design, which may be roughly described as outline and wash in two dimensions, no attempt being made at representing the third dimension or even to indicate anything in the way of shading or folds of

drapery and so forth. Figures are drawn in black outline, filled in with broad washes of colour, on which again details of ornament, &c., are added. The liberal use of what Sir Arthur Evans has described as "artistic shorthand"* is further evidence of the rapidity with which the paintings were executed.



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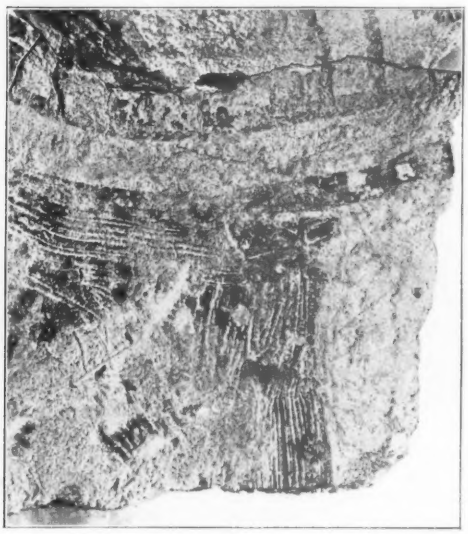


B

FIG. 16.—FRAGMENT OF PAINTED PLASTER SHOWING BRUSH MARKS. A, less than natural size. B, portion outlined in A enlarged.

The skill with which figures in low relief were modelled in the plaster, details such as the muscles of the arm being accurately represented, indicates that it was not from any want of skill but rather by deliberate intention that the paintings were executed in this manner. One specimen of plaster in relief which I found in the Museum at Candia provides some evidence of the division of labour in the preparation of these decorations. Here the modelled portion was not continuous with the general surface of the wall but added to the flat surface, for I could trace the line of junction; moreover, the wall had been treated with a thin wash of red on the flat before it was added. Evidently the general wall surface was prepared by the plasterer and the modelling added immediately afterwards by a more skilful worker.

As regards the insertion of the panels this is suggested by the fact that fragments decorated in the characteristic manner employed for the borders of these panels often show a straight clean cut edge, showing that there was a joint in the plaster here, whereas in the corners of the rooms and even at the junction of walls and floor the plaster is returned without a break. In this connection it is interesting to compare the conclusions arrived at by Dr. Mackenzie in his report on the frescoes found in Melos,† which are, as he shows, Cretan in origin. He notices the clean edges which surround the design "as though the picture had been enclosed in a wooden frame," and suggests that such designs may have been prepared in framed panels at Knossos, the centre of the craft, for export.

In the foregoing remarks I have endeavoured to trace the development of the use of lime-plaster and fresco decoration from the earliest times to the second Late Minoan period, when art and civilisation alike suffered a period of eclipse in Crete with the fall of the great Minoan palaces. With the transfer of supremacy to the mainland of Greece, the rise of Tiryns, Mycenæ, &c., and the development of Homeric ages, a fresh chapter opens in the history of decorative paintings, involving many vexed questions, the discussion of which would take us beyond the scope of the present article.

* Provisional Report for 1900: *Annual of the British School at Athens*, vi. p. 47.
† *Journal of Hellenic Studies*, 1904, Supp. 4, pp. 70–77.

EWAN CHRISTIAN

(President R.I.B.A. 1884–86, Royal Gold Medallist 1887)

A MEMOIR.

By J. Standen Adkins, Licentiate R.I.B.A.

IN the troublous times which preceded and followed the Commonwealth, William Christian, of Ronaldsway, familiarly known among the Manx people as Illiam Dhone, was the champion of the rights of the islanders against the arbitrary power of the Earl of Derby, "King of Man," and drew down on himself the bitter resentment of the house of Stanley. Being absent from the island at the time of the Restoration, he hesitated to return, but on the proclamation of indemnity he crossed the sea, and on landing was seized by order of the Countess of Derby, condemned after an irregular trial, and shot at Hango Hall 2nd January 1662. By the peasantry he was regarded as a martyr to their cause, and his fate was bewailed in a popular ballad, while his memory has been kept green among readers of fiction by Sir Walter Scott, who made the execution the keynote of *Peveril of the Peak*.

This same William was the son of the first who bore the name of Ewan Christian, having dropped the prefix of the ancient family name McChristen, by which his ancestors had been known from their first settlement in the Isle of Man.

Another Ewan, grandson of William, died in 1719 leaving two sons, John the elder and Thomas; among the descendants of the elder brother were numbered Edward Law, who became Attorney-General and was raised to the peerage as Baron Ellenborough, and Fletcher Christian, the ringleader of the mutineers of the *Bounty*. The younger son Thomas took Holy Orders and settled in Westmorland; his grandson, Joseph, married Miss Katherine Scales, of Thwaitehead, in Lancashire, and was residing in London when his seventh child was born on 20th September 1814. To this son was given the favourite family name Ewan, and he soon grew to be a sturdy little fellow, taking the keenest delight in country pursuits when taken by his parents to stay with friends. When he was seven years old his father died, and he lost his mother the following year, but, although deprived of her care at such an early age, her influence had already done much to form his character, and he always cherished and deeply revered her memory. After the death of his parents he went to live with his grandparents at Mortlake, where his grandfather soon recognised his ability and his determination to accomplish whatever he attempted. In 1823, in his ninth year, he was admitted to the junior department of Christ's Hospital, and after a short time spent in the Hertford school was transferred to the great school in Newgate Street, where, as he wrote many years after, he was buried in bricks and stone and mortar, with no trees, flowers, or insects—and never in contact with anyone who cared for country delights. To this town education Mr. Christian ascribed a deficiency in the habit and power of observation which might have been fostered by the opportunities of country life; but, however apparent such a defect may have been to himself, it was far from being so to those who had the privilege of accompanying him on his travels either on business or pleasure, for it always appeared that nothing of interest escaped his notice.

There was, however, one great compensation, and the faculty of observation which could not be directed on the beauties of Nature was diverted to the practical study of the art of which he was destined to become a master. The erection of the great dining-hall, designed by John Shaw, Surveyor to the Governors of Christ's Hospital, was coincident with his stay at the school, and its completion took place just before he left. Of course, the boys were not allowed within the area of building operations, but the attraction was irresistible, and the usually law-abiding youth enlisted the sympathy of the workmen, who connived at his presence in a secluded corner from which he could observe all that was going on. Originally destined for Holy Orders, it is probable that the interest in building developed by these surreptitious visits may have been the determinative cause of his final choice of a profession.

Leaving school in 1829 he went to reside with his eldest brother, John, and on his fifteenth birthday was articled to Mr. Matthew Habershon, of 61 Mortimer Street, Cavendish Square.

A fellow-pupil was Thomas C. Hine, with whom he always continued friendly relations, and in the third year of his articles he was joined in the office by James K. Colling, who was two years his junior, and thus was commenced a friendship and professional connection destined to prove lifelong, Mr. Colling having been associated with Mr. Christian in his latest work, being entrusted with the design and superintendence of the carving at the National Portrait Gallery.

In the early years of pupilage Ewan Christian was admitted to the Architectural School of the Royal Academy, and attended the courses of lec-

tures by Sir John Soane, read in his absence by the Professor of Painting, and described many years after by the student as being devoted to "all the dry bones of the art, with but little allusion to its glorious beauties." More congenial work was found in the drawing school to which he always alluded with appreciation, and he made such good use of the opportunities afforded that his work was twice hung at the annual exhibition before the termination of his articles.

In 1834 he made his first continental tour, lasting three weeks, during which he visited Paris, Orleans, Tours, Saumur, and Nantes. On returning to England he prepared designs for churches at Clappersgate and Kendal in the hope of being appointed to carry out the work.

About this time Mr. Habershon was engaged in the preparation of a book illustrating the Half-Timbered Houses of England, and he employed his late pupil to hunt for suitable examples in Lancashire, Cheshire, and Shropshire, and to prepare drawings of those which he found. So ably was this commission fulfilled that when the book appeared in 1836 more than half the illustrations were from his sketches.

After the great fire which destroyed the Houses of Parliament, the Select Committee issued a report in favour of an open competition for the new buildings in June 1835. Designs were accordingly advertised for, and were required to be delivered by 1st November of the same year. Nearly a hundred architects competed, among them Mr. W. J. Turner, who engaged Mr. Christian to assist in the preparation of his drawings. The shortness of the time allowed for the execution of designs, which were of necessity somewhat complicated, involved close application, and work had to be continued by artificial light to such an extent as to involve a severe strain on the eyesight which produced soon after a serious weakness.

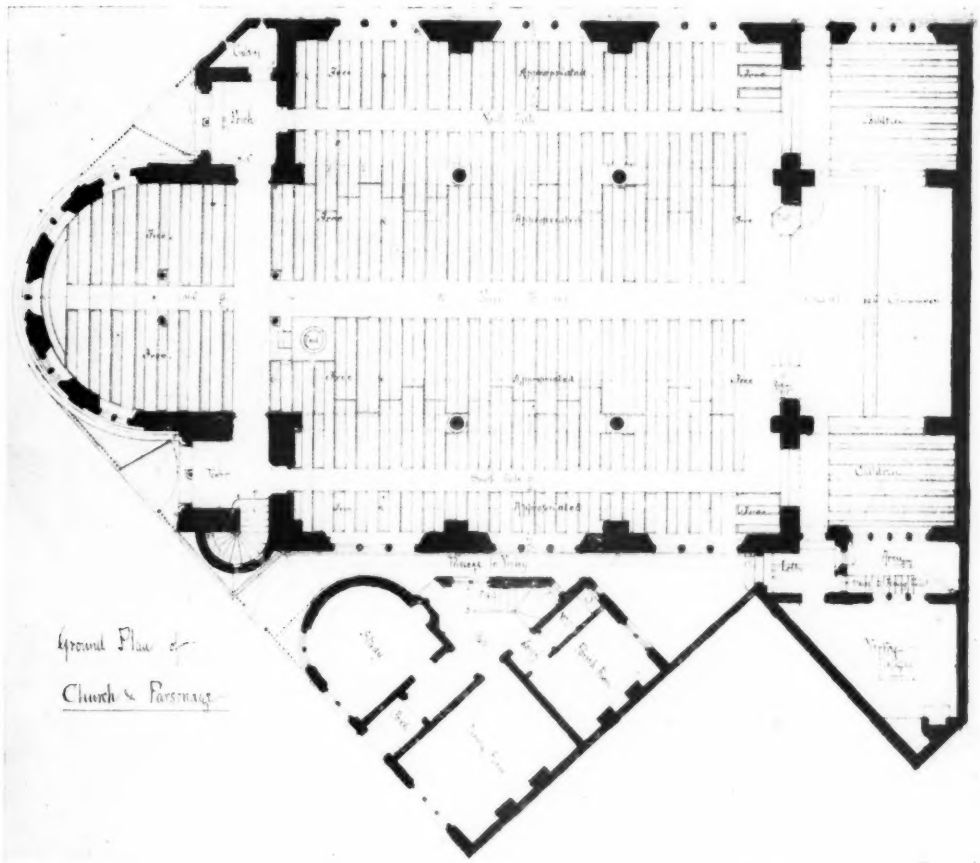
The first four months of the next year were spent in the office of Mr. William Railton (afterwards Architect to the Ecclesiastical Commission, 1838-48), and in April he entered the offices of Mr. John Brown, of Norwich, where he was again associated with his former fellow-pupil, J. K. Colling, and was engaged in the preparation of the drawings for Colchester Union, a work which completed the injury done to his sight in Mr. Turner's office and necessitated an absolute rest from drawing. As a period of inaction was not at all consistent with his disposition, he decided to turn the enforced respite from office work to good account by gaining experience of practical work, and to this end obtained the appointment of clerk of works to superintend the erection of the buildings at Colchester for which he had prepared the drawings. In this capacity he was distinguished by indefatigable attention to his duties and the minute accuracy of his reports; but his relentless hostility to all attempts at scamping often brought him into conflict with the workmen employed. At one time when they thought him absent, he saw from a window overlooking the site some of the men hurriedly laying a bed of loose gravel where concrete was specified, and before they could cover it in he suddenly confronted them with an indignant rebuke. On another occasion when an important drain was being laid he watched the progress of the work "like a cat watching a mouse," and this close surveillance was so greatly resented by the workers that they determined to revenge themselves by bringing discredit on the clerk of works who interfered with their slipshod methods. The drain was at length finished, but no sooner was it flushed than a considerable portion of it burst up. On examination it was found that a flagstone had been inserted in the course of the drain, and further inquiries at length elicited the information that one day after suspending work for the dinner-hour and watching the clerk of works safely away from the site, the men had returned, uncovered the section of drain just completed, built in the stone and carefully filled in the ground so as to make it appear just as it had been when left.

In 1840 Mr. Christian became an Associate of the Institute, and soon after was engaged in superintending the erection of the church of St. Margaret, Lee, under Mr. Brown. In June of the following year he was appointed Surveyor to the Marylebone Savings Bank, which was apparently his first independent work; but very little could have been carried out at this time, as within four months of the appointment he left England for an Italian tour extended over more than seven months, three of which were spent in Rome, where he made the acquaintance of T. Hayter Lewis and Horace Jones. Other places visited during the tour were Turin, Genoa, Leghorn, Pisa, Naples, Pæstum, Amalfi, Florence, Bologna, Venice, and Milan.

Some months after his return from Italy Mr. Christian took up his residence and started an office at No. 44 Bloomsbury Square (25th October 1842), and submitted a design in competition for a church at Hildenborough, which proved successful. This work was carried out in the following year. The church dedicated to St. John was designed to accommodate a congregation of six hundred in a wide nave with shallow transepts; in point of design it can hardly be considered a success from the present standard, but it was decidedly in advance of most ecclesiastical work of the time; the style was "Lancet," the east end formed the half of an irregular dodecagon, a tower surmounted by a broach spire occupied the angle between the chancel and south transept, its lower stage formed a porch and contained a staircase, giving access to a gallery which occupied the transept, cutting across the lights of a triple lancet window in its south wall, an error in design which was carefully avoided in all subsequent work. A view of the church was exhibited at the Royal Academy in the year of its

erection. The following year he was entrusted with the restoration of the church of St. Nicholas, Austrey, Warwickshire, an interesting church with work of the thirteenth, fourteenth, and fifteenth centuries; the operations comprised some rebuilding and general repairs, renewal of window tracery and weathering of buttresses, re-roofing, and a new south porch, and the whole was completed to the satisfaction of all concerned.

study of their chosen profession and equally indefatigable in work; each finding the same enjoyment in the observation of the beauty of Nature, it is not surprising that the connection proved lifelong, and that when in after years the office grew to large proportions Mr. Purday was entrusted with the chief part in its management and eventually received as a partner. Mr. Christian was always an early riser, and at this period he used to indulge in



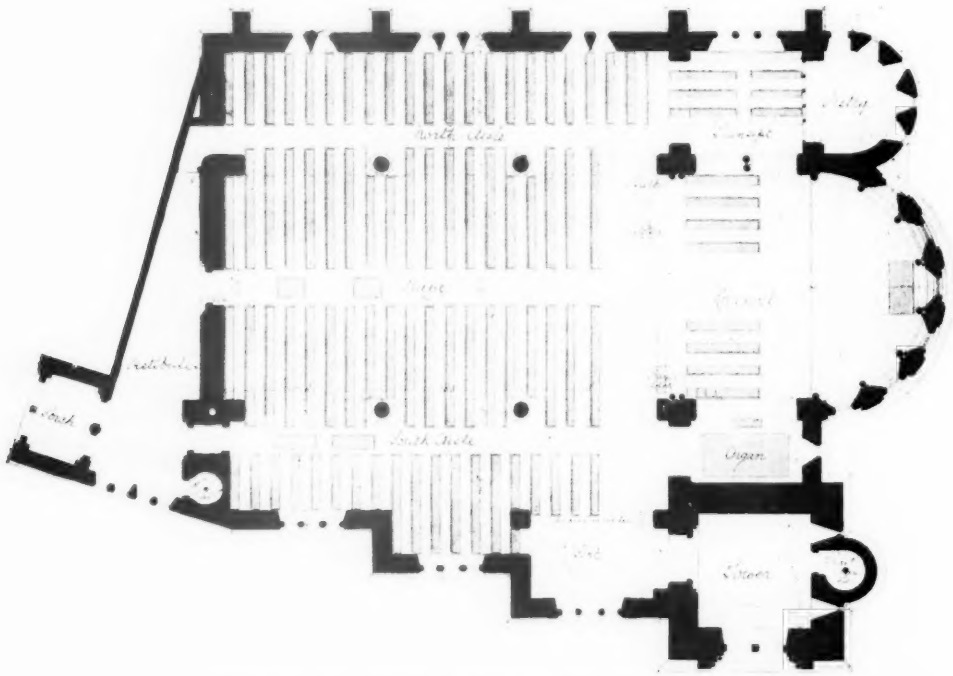
CHURCH OF ST. STEPHEN, SPITALFIELDS. GROUND PLAN OF CHURCH AND PARSONAGE. EWAN CHRISTIAN, ARCHITECT.

In 1845 Mr. Christian erected his first clergy house, a vicarage at Preston, Lancashire, of quiet domestic character, stone built, with square-headed mullioned windows and well proportioned gables; and received his first pupil, Charles Henry Purday, son of Mr. Henry Purday, the well-known composer and writer on musical subjects. Rarely have master and pupil been so well suited to each other, both devoted in the most whole-hearted way to the

a brisk walk round the "squares" in the early morning, probably regarding these patches of turf and foliage as oases in the desert of dreary streets, and finding refreshment in the comparative quiet and freshness at an hour when but few people were stirring. A frugal breakfast was followed by a day of hard work, often continued until late at night when pressure occurred, but naturally in the early years of independent practice, in spite of

numerous competitions, and the conscientious attention to every detail of such commissions as were secured, there was often not enough of occupation to satisfy his appetite for work, and in order to fill in the intervals of enforced leisure he decided to undertake the illustration of an ancient church for publication. With this intention he sketched and measured the little parish church of Skelton, a few miles out of the city of York, and proceeded with the preparation of the book whenever other work was not available; every matter in connection with its production was looked after with characteristic attention to detail, even the binding was designed by the author and carried out under his care. When the drawings were nearing completion he discovered that one of the minor details had not been actually measured; I think it was the cross on the bell gable; so he set off to York in mid-winter to amend the omission, taking advantage of the occasion to compare the drawings with the building and to correct and complete them on the spot. The views were drawn on the stone and the measured drawings on zinc by J. K. Colling. The publication was undertaken by George Bell and a circular issued in the following terms:—

Just published, *Illustrations of Skelton Church, Yorkshire*, consisting of General Lithographic Views in Tints, and a Plan, Elevations, Sections, and Drawings in detail of all the Mouldings and Enrichments, made from measurements carefully taken for the purpose, by Ewan Christian, architect, and drawn in outline upon zinc by J. K. Colling. Together with a short descriptive account of the building in its past and present states. For the information of such as are unacquainted with this unique and interesting little Church, it may be advisable to state that it is one of the most perfect specimens of Early English Architecture on a small scale to be found in the kingdom, combining with a singular simplicity of form and outline, much elegance, beauty, and purity of detail, every way worthy of the attentive study of the ecclesiastical architect.

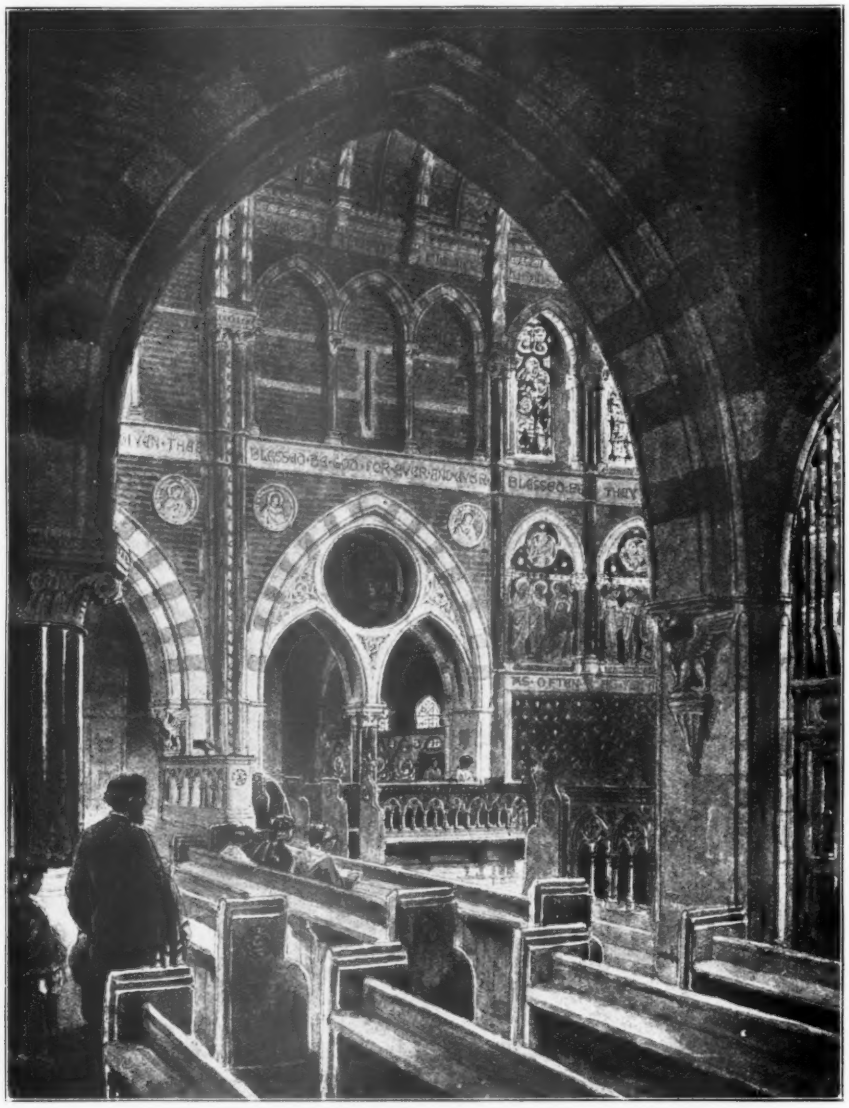


CHURCH OF ST. MARK, LEICESTER. GROUND PLAN. EWAN CHRISTIAN, ARCHITECT.

The book appeared in 1846 with a list of over 170 subscribers, including the names of most of the leading architects of the day, though some of the old school held aloof. Conspicuous among these was Professor Cockerell, who, in response to the author's invitation to subscribe for the work, addressed to him a politely worded letter expressing the most absolute disapproval of all attempts to illustrate mediæval buildings or to assist in any way in the Gothic revival. Encouragement was not, however, wanting, and numerous letters were received expressing approval of the book; as an example of the general tone I quote a few words from the letter of James Wylson, architect, of Glasgow: "I sincerely hope it (the book) will realise your expectations in

CHURCH OF ST. MARK, LEICESTER. EWAN CHRISTIAN, ARCHITECT.

every respect, but if the pecuniary advantage gained be nothing to speak of, it must otherwise be a source of satisfaction that it has fallen to your lot to lay before the public and the profession an example so universally admired." It is significant of the changes which have taken place in the architectural world since that date that a clergyman wrote referring to the subscription list: "I counted 120 architect subscribers. Is it possible that so many can have full work?" Unfortunately the architect to whom the letter was written could not at that time reply that he for one was fully employed; so far was this from being the case that frequently his only occupation was the unsatisfactory one of thinking over the possible means of securing commissions, and he soon determined to



CHURCH OF ST. MARK LEICESTER: SKETCH BY A. H. HAIG. EWAN CHRISTIAN ARCHITECT.

undertake the illustration and publication of another old church. The second book, however, was never completed as the time of slackness was nearly at an end. A change of address was effected to No. 6 Bloomsbury Square, formerly the residence of Isaac Disraeli, now known as No. 5, and about the same time a competition was promoted for the restoration of the church of St. Mary, Scarborough (1847), for which he entered and devoted himself with eager enthusiasm to the preparation of the drawings. They were completed during a visit to the Isle of Man, and to ensure their delivery by the specified date he made the passage to the mainland in spite of a stormy winter sea which rendered the journey so hazardous that his friends begged him to abandon the competition rather than run the risk. The crossing was effected in safety, but the difficulties were not yet at an end. A heavy snowstorm blocked the line so effectively that a gang of about a hundred men were set to clear the track, and their exertions produced only an average speed of a mile an hour. But perseverance was at least rewarded, the drawings reached Scarborough just in time and earned for their author the unanimous approval of the judges and the commission to carry out the restoration. During the progress of the building (1848–50) Mr. Purday took up his abode at Scarborough to superintend the work, and his reports evidence the careful way in which he attended to the most minute details of the operations.

In the same year in which the Scarborough competition was won Mr. Christian carried off the second premium in the competition for the city offices of the Imperial Assurance Company with a Renaissance design of considerable merit, the best feature of which was the treatment of the rounded angle between Broad Street and Threadneedle Street. Another event of the year was his election to the appointment of Consulting Architect to the Lichfield Diocesan Church Building Society.

On the 6th July 1848 Mr. Christian married a daughter of Mr. William Walker Bentham, of Rochester. With characteristic devotion to duty he rose at an early hour on his wedding-day to write an important report or specification which was required without delay. The new home was established in Hampstead, and from that time onward Mr. Christian was identified with every project for the benefit of the inhabitants of the poorer districts in the neighbourhood or for the preservation of the beautiful environment of the suburb.

In 1850 Mr. Christian was elected Fellow of the Institute, and in 1851 was appointed Architect to the Ecclesiastical Commission, in consequence of which he removed his offices to a portion of the building occupied by the Commissioners (No. 10 Whitehall Place); he also became a member of the Committee of Honorary Consulting Architects to the Incorporated Church Building Society. In each case the connection was continued to the last year of his life and he eventually became Chairman of the Committee. In the course of the same year the Corporation of Wolverhampton invited him to report on the condition of the church of St. Peter in that town, and his elaborate report was published in January 1852 in pamphlet form, with eight small plates reproduced from careful drawings which he prepared specially for that purpose. The most urgent works were at once proceeded with and extended over four years, but much still remained to be done and the restoration was continued at intervals during twenty years.

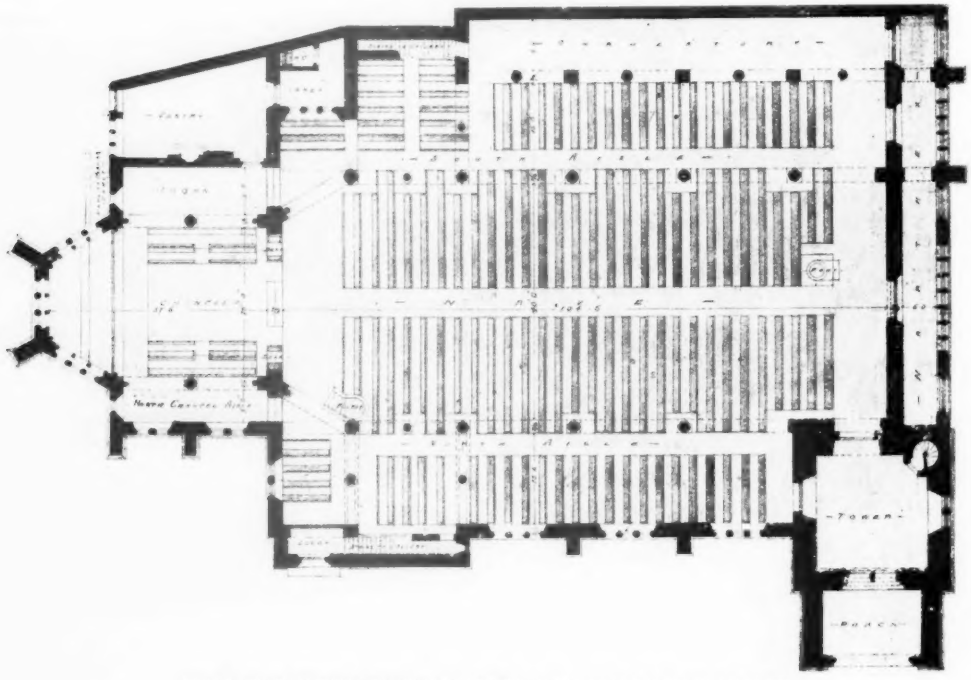
In the establishment of the Architectural Museum Mr. Christian took a leading part from its first inception, and to him was entrusted the task of making arrangements, financial and otherwise, with Mr. (afterwards Sir) Henry Cole, of the South Kensington Museum, for the formation and exhibition of the collection. When in 1867 the present building in Tufton Street was erected he and Mr. Joseph Clarke were associated as joint architects.

In 1853 were commenced the works of restoration at Carlisle Cathedral which were carried on for nearly twenty years. An incidental result of this work was a connection, professional and friendly, with Dr. Tait, then Dean of Carlisle, continued during his administration of the dioceses of London and Canterbury. Mr. Purday was deputed to superintend the work and resided at Carlisle during the first three years. An interesting experience was the setting out for restoration of the tracery of the great east window; a large, boarded platform was prepared and covered with paper on which he drew a full-size detail carefully measured from the badly decayed stones of the old window. In the restoration of the coloured decoration of the choir ceiling, of which some traces remained, Mr. Christian was associated with Mr. Owen Jones.

As a thank-offering for the cessation of a visitation of cholera, the parishioners of St. Mary's, Bryanston Square, decided to build a new church to be appropriately dedicated to St. Luke the Physician, and a site was procured of somewhat inconvenient form, being deeper from north to south than in the opposite direction. The design was made the subject of a competition, which Mr. Christian won with a plan probably inspired by the church of St. Martin, Ludgate, which occupies a somewhat similar site, though differing from it by the extension of the chancel and the detachment of the tower. The main entrance doorway may have been suggested by the south door of Skelton Church, though in the style of a century later. As an example of the architect's painstaking care in designing, it may be mentioned that three separate designs for the tower were worked out in large perspective drawings, and the one chosen from these was modified somewhat in the competition drawings. An entirely different treatment for the principal front was shown in a carefully drawn large

scale elevation; this was probably intended for a church with the main axis running north and south, and the idea does not appear to have been worked out. The original design included a crypt intended to be used as a school, probably in consequence of a requirement of the competition, but this was abandoned fortunately for the children of the district, and a few years later a three-story school building was erected close to the church and on an almost equally difficult site, which though not fulfilling all the conditions now considered essential was remarkable at the time of its erection for the loftiness of the rooms and the large amount of window surface.

restoration of the conical roof of the Chapter House and of the spires of the western towers, the former of which had been replaced by a roof of very low pitch; the latter had been removed entirely, and a parapet with poor angle pinnacles substituted. In determining the form of these features Mr. Christian sought diligently for evidence as to what formerly existed, and discovered several old engravings and a water-colour drawing ascribed to Turner. The work was carried out by R. Clipsham, of Norwell. When the roof of the porch was taken in hand it was noticed that the old carver who had executed the figure of a bear which formed the apex of the gable, had conscientiously carved the buckle of a



CHURCH OF ST. MATTHEW, CHELTENHAM. GROUND PLAN. EWAN CHRISTIAN, ARCHITECT.

In 1857 the works of restoration at Southwell Minster (now the cathedral) were commenced. The repair of the walls and masonry was entrusted to a resident mason, John Gregory, and his assistant John Cook, a worthy pair, who worked in the spirit of mediæval craftsmen and steadily devoted themselves for eighteen years to the task of making the old structure sound in every respect, during which period they occasionally employed other workers, but only when the nature of the work rendered assistance necessary. When this section of the restoration had been satisfactorily completed, the re-roofing was taken in hand, the pitch being raised to the original angle. This work included the strap of its muzzle on the top of the head where it could never be seen from below. The last works carried out before the old minster became a cathedral church were the re-flooring and partial refitting of the choir, executed by Messrs. Cornish & Gaymer, of North Walsham. Some fragments of the thirteenth-century screens were found which enabled an accurate restoration to be made; the old form was therefore reproduced, though the treatment was not a suitable one for execution in wood, being far too reminiscent of masonry.

The little modern church of the parish of St. John Baptist, Kingston Vale, after only twelve years existence proving insufficient for the needs of the

inhabitants, in 1859 Mr. Christian built on a new site the first portion of an unassuming little church which would not have called for special mention were it not for the historic interest which it has since acquired. The completion of the church by the erection of the south aisle was taken in hand in 1874, and the corner-stone was laid in December of that year by a lady who, though not actually a parishioner, had always taken a great interest in the parish. Some time afterwards she was visiting the church attended by her little daughter, and in conversation with the vicar the latter made some

CHURCH OF ST. MATTHEW, CHELTENHAM. EWAN CHRISTIAN, ARCHITECT. Photo. A. G. Tod.

complimentary remark about the child, to which her mother laughingly replied, "Oh, we think nothing of her, she is only a girl." The "girl" is now Queen of England. Though White Lodge was beyond the boundary of the parish, the church was the nearest to it and was attended by the ducal family; the reredos, designed by Mr. Bodley, was erected as a memorial to the Duchess of Teck, the altar cross and candlesticks being given by Princess Mary and her brothers.

A church and vicarage erected at Spitalfields in 1860 may be mentioned as an example of Mr. Christian's skill in adapting the plan of his buildings to the most unpromising of sites and of his disregard of conventional ideas when practical reasons existed for departure from them; the employment of an apsidal west-end in conjunction with a square-ended chancel is probably unique; the treatment of the elevations was inspired by Rhenish work.

In consequence of a report as to the dangerous condition of the tower of Chichester Cathedral, made by the clerk of works engaged on the works of restoration then in progress, the Dean wrote on the 9th February 1861 to request Mr. Christian to make an independent survey and report at as early a date as possible. An appointment was made alternatively for the 19th or 20th, and providentially the earlier date was selected and the survey completed without mishap. The next day the tower fell during a heavy gale about the time at which the inspection would have been in progress if that day had been chosen.

The work of the Ecclesiastical Commission had by this time grown to such an extent that the whole of their premises in Whitehall Place were required for their clerical staff, so that it became necessary for their architect to seek accommodation elsewhere. Shortly before this time he had been engaged on the conversion of the stables and yard in the rear of No. 8 Whitehall Place into offices for

Mr. T. D. Calthorpe, and as these were now unoccupied they afforded an opportunity of establishing an office in convenient proximity to that of the Commissioners.

Soon after the removal to these premises the staff received a notable addition in the person of a young Swede who, having been trained for the profession of naval architecture, came to England to gain a wider experience; failing to obtain an opening he went North and spent some time working for a firm of shipbuilders on the Clyde, where he not only distinguished himself by attaining proficiency in his original profession, but also displayed his nascent powers in another by designing and superintending the erection of a house for the head of the firm. Finding that the designing of buildings to be erected on terra firma gave greater scope for his artistic instincts than could be found in laying down the lines of ships, Axel Herman Haig determined to give up naval in favour of civil architecture, and travelled up to London provided with an introduction to an architect in good practice, who, not having an opening in his own office at the time, obtained for him an interview with Mr. Christian. The latter, immediately appreciating the talent of the young draughtsman, received him into his office, where he remained for about nine years working at first chiefly on the ordinary working drawings, but soon showing so much ability for the more artistic side of the profession and attaining such proficiency in water-colour drawing—an art in which he was self-taught—that his assistance was soon eagerly sought for by some of the leading architects of the day, and Mr. Christian, who had from the first given every facility for the exercise of Mr. Haig's artistic inclinations, now gave him the opportunity of accepting all such commissions while still continuing to work in the office until the outside work had grown to such an extent as to require the whole of his time. Some years after leaving the office he was induced to take up the art of etching, and, again self-taught, commenced to produce the wonderful series of etchings of architectural subjects by which he is now best known.

Another notable member of the staff was Mr. George Birch, F.S.A., who had been an assistant of Sir M. Digby Wyatt; he was one of the founders of the St. Paul's Ecclesiological Society, and was still engaged in Mr. Christian's office when he produced the Old London Street which formed one of the chief attractions of the "Healtheries" Exhibition of 1884.

In 1872 Mr. Christian was appointed by the trustees of the late Misses Walker to advise them in the selection of a design for the new Cathedral of St. Mary to be built in Edinburgh, and after a careful examination of the six sets of drawings submitted in the competition he sent in a lengthy and elaborate report which very clearly and systematically set forth the merits and demerits of each design, and then in summing up made a very definite statement of the order of merit. The committee, however, decided to disregard their assessor's indication, announced their own choice, and declined at first to publish the report. A somewhat heated correspondence partially carried out through the professional papers followed, and at last the committee waived their objection to the publication of the report, stating that they had only desired to suppress it on account of the unfavourable criticism on one of the designs which it contained, and which they feared might give offence to the architect who had submitted it. Their decision as to the selection of the design to be carried out remained unaltered.

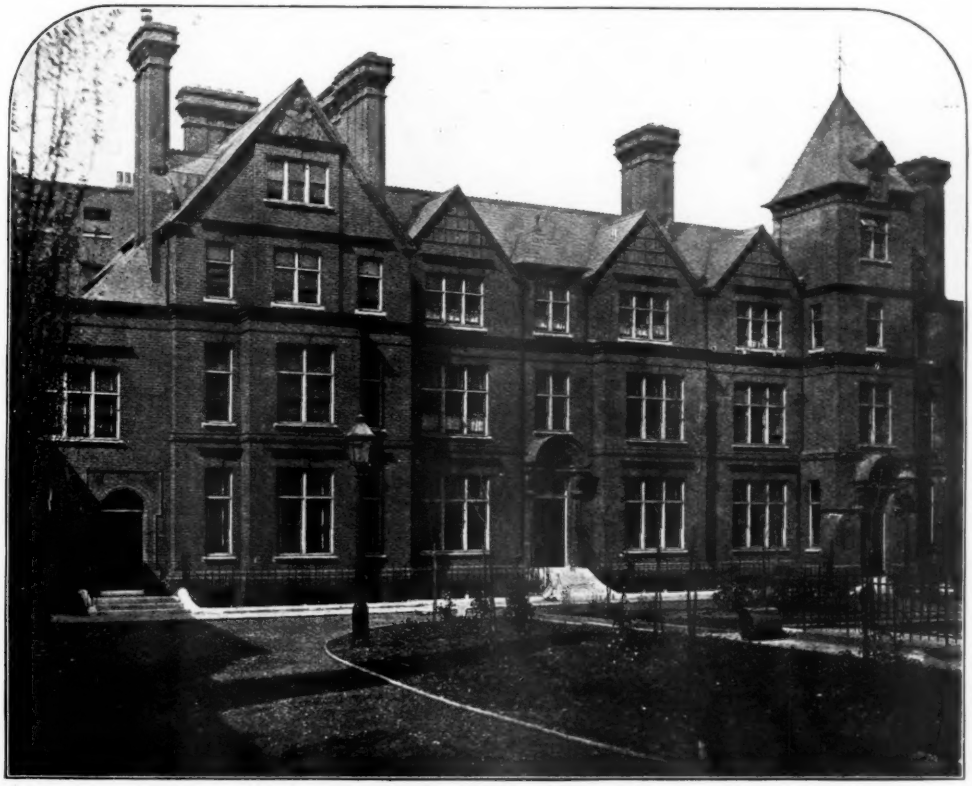
In 1874 Mr. Christian entered into partnership with his cousin, Mr. Joseph Henry Christian, and his former pupil, Mr. C. H. Purday, then his principal assistant; it was, however, an entirely private arrangement, all work being still carried out in the name of the senior partner only.

Early in 1876 the restoration of the parish church of Alconbury was commenced. The structure was of considerable interest, having much good work dating from the early thirteenth century up to the late Perpendicular period, but was badly fractured and dislocated throughout. The western tower was about 20 feet square, 46 feet high to springing of spire and 110 to its apex. The lower part up to about 32 feet above the ground was of the early part of the thirteenth century, the remainder somewhat later. The walls of the lower part were covered with a coat of cement which bulged out in places in an ominous manner, and when in the course of the restoration this was removed the walls were found in such a precarious condition that the contractor declined to proceed unless the whole tower was taken down at once. As the upper part was comparatively sound, Mr. Christian was reluctant to agree to its demolition, and after much consideration he decided to support the belfry stage and spire by means of strong timbering while the foundations were rendered safe and the substructure rebuilt. The squire of the place gave *carte blanche* for the expenditure involved, an experienced builder was entrusted with the work, and when the needling was completed, the lower walls were removed and the upper part, about 80 feet in height, remained *in situ* standing on wooden legs until the rebuilt lower stage rejoined it. The whole operation was carried through without any accident, and a brass-plate fixed in the church records the history of the tower and bears a representation of the framing employed.

In 1880, as Vice-President, he became a member of the first Board of Examiners in Architecture appointed by the Institute.

In 1882 was completed the house designed and built for his own residence situated in Well Walk, Hampstead, and called "Thwaitehead" after the family home in Lancashire. Here were carried out

the architect's favourite methods of construction and arrangement, and decorative inscriptions were arranged with much thoughtful care, windows, friezes, and chimney-pieces being adorned with quotations suggested by the use of the rooms or some other circumstance. An old wrought-iron sign bracket and a metal-clad door which had been rejected during the "restoration" (!) of a church in Nürnburg had been picked up during a recent tour and were utilised for the new house—the former to carry an external lamp—the latter for the front entrance door.



MINOR CANONRIES, ST. PAUL'S. EWAN CHRISTIAN, ARCHITECT.

In the adjudication of the competition for the Admiralty and War Offices, Mr. Christian was associated with Mr. Philip Hardwick. They were appointed not as professional assessors, but as professional members of the board of judges, the other members being the Chancellor of the Exchequer, G. J. Shaw-Lefevre, First Commissioner of Works, and Mr. W. H. Smith. The task was no sinecure as the competition was in two stages, in the first of which no fewer than 128 designs were submitted, and the complicated nature of the problem involved may be gathered from the fact that the conditions required the provision of accommodation for about 1,500 persons.

In the Jubilee year of the Institute Mr. Christian was elected President, and during his term of office the inception of the new Charter took place, the Royal Gold Medal was presented to Mr. William Butterfield and Dr. Schliemann, and an unsuccessful attempt was made to open up the east end of St. Paul's Cathedral in connection with the removal of the old school-buildings, in the course of which he addressed letters to the Lord Mayor and *The Times* officially voicing the opinion of the profession on the subject. During the year 1886 Mr. Christian was engaged in the examination of the competitive designs for the cathedral to be erected at Liverpool on a site adjoining St. George's Hall, and his report was published in December. His award was received with some dissatisfaction and adverse criticism in certain quarters, but there can be no doubt that it was the outcome of a most judicious consideration of the several schemes, resulting in an entirely unbiassed honest conviction that the de-

sign placed first was the one which most nearly fulfilled the requirements of the case. Probably nowhere was the decision heard with greater surprise and satisfaction than in Mr. Christian's own office, where there was an almost unanimous feeling in favour of Mr. (now Sir) William Emerson's design, though it was thought almost certain that the principal's well-known enthusiasm for the traditional forms of English mediæval work would prevent his full appreciation of a design which so boldly disregarded them.

In 1887 Mr. Christian received the Royal Gold Medal, and in the same year he was appointed Consulting Architect to the Charity Commissioners. In the latter capacity he undertook to make surveys and prepare reports on the condition of the old parish churches of the City of London. Each report, of which there were more than fifty, included a plan of the church as then existing, an estimate of the cost of putting the fabric into a state of thorough repair, and of the probable annual cost of maintenance, and also an investigation of the manner in which the funds of the church had been administered. The task was by no means a light one, especially for a man of advanced age, but it was entered on with enthusiasm and carried out with vigour with the assistance of two members of his staff, Mr. W. A. Coombs and Mr. P. L. Forbes. The latter writes:

"I never saw such energy in any man of his age. He was over seventy when we were surveying the City churches, and the way he went up and down the ladders was wonderful, and then he delighted to sit in the sun on the parapet of the church to write his report. In the summer-time he was clad in a light overcoat and white hat, with a yellow case for his field-glasses slung over his shoulder, for all the world like some old gentleman going to the races. There he would stand on the pavement, in the middle of the busiest thoroughfares, gazing at the masonry of the towers through his glasses. Then to see him testing the stonework with a heavy sledge-hammer, swinging it with one hand like a man of thirty. I think that of all the work he undertook in his long life, this City church survey was the most remarkable—his wonderful activity both of body and brain, his keen perception into decay and its causes, and his marvellous tackling of churchwardens and their books. He used to sit in the vestries and read over the churchwardens' books for twenty years back to see what moneys they had expended on the fabrics, and we came across many items which aroused in him great wrath.

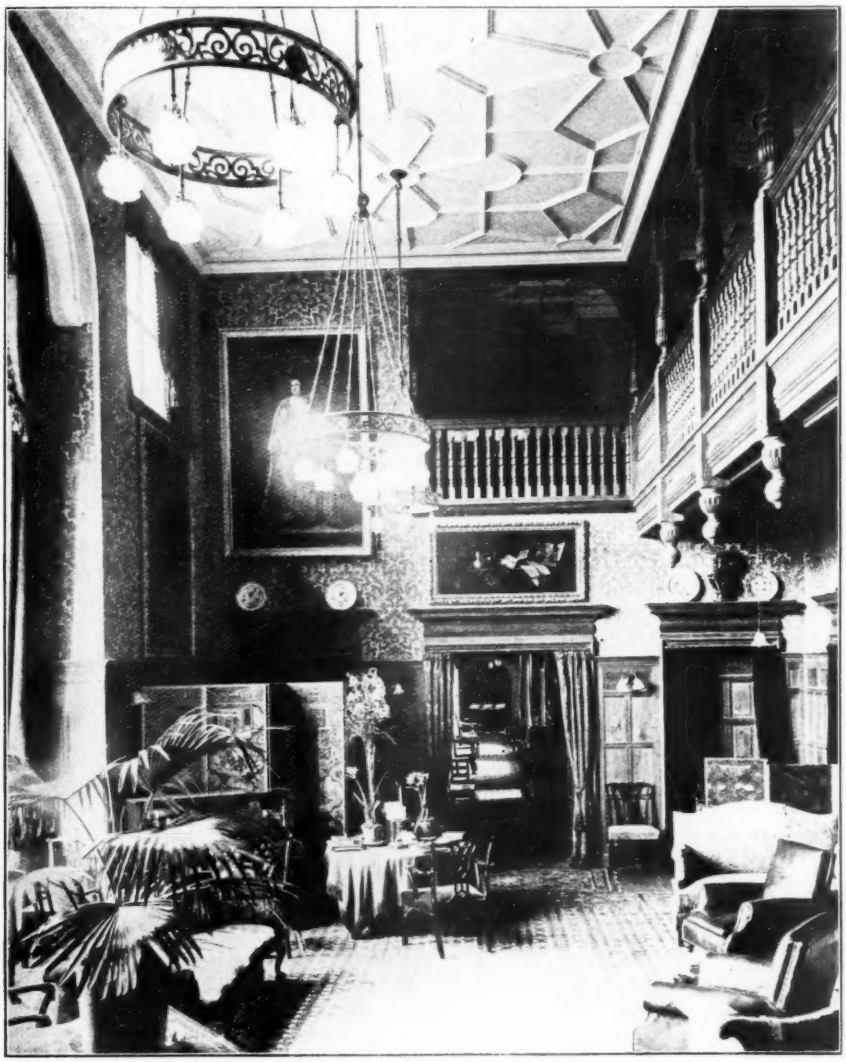
"The last church we surveyed was St. Dunstan-in-the-West, and on coming into the vestry, when our work was done he said to Mr. Coombs and me: 'Now we have undertaken and finished a great and sometimes dangerous work, so let us thank God for preserving us from accident all the time,' and he uncovered his venerable head with its snow-white locks and offered up a prayer of thanksgiving."

Photo. Shrubsole.

WOODBASTWICK. ewan CHRISTIAN, ARCHITECT.

In 1889 Mr. W. H. Alexander, who had already entrusted Mr. Christian with several important commissions, instructed him to prepare plans for a gallery to contain the national collection of portraits, the cost of which he proposed to defray. For this important work Mr. Christian made preparation by a diligent study of the most important public and private galleries at home and abroad, with the two-fold object of securing good lighting

for the pictures and economy of space. In the matter of style he considered himself bound by that of the existing buildings of the National Gallery, of which the eastern wing of the new buildings appeared to form the return façade so far as this portion was concerned, but after passing the flank of the old gallery he changed the style to the Italian Renaissance, the main block being inspired by the Florentine palaces and the principal entrance by the façade of the desecrated church of San Spirito at Bologna. Unfortunately the original design was modified in execution, partly in order to keep the cost within the prescribed limit and partly on account of other considerations. The main block was at first intended to have a bold dentelled string-course over the second range of windows, suggesting the division of the interior into its three stories and forming a deep frieze intended to contain large panels occupied by appropriate sculpture; the omission of this feature has



THE HALL, WOODBASTWICK. EWAN CHRISTIAN, ARCHITECT.

resulted in giving the effect of a building consisting of two stories only, of which the upper one is decidedly heavy in treatment. Another feature which has been adversely criticised is the grouping of the two pediments over the principal entrance, also the result of a deviation from the first design in which the raised block over the staircase was finished with a hipped lead roof. In this, his latest and largest important work, Mr. Christian was once more assisted by the companion of his pupilage, Mr. J. K. Colling, who was engaged to prepare full-size drawings of the foliage sculpture and to model the more important portions.

WOLDRINGFOLD. HOUSE NEAR HORSHAM. EWAN CHRISTIAN, ARCHITECT.

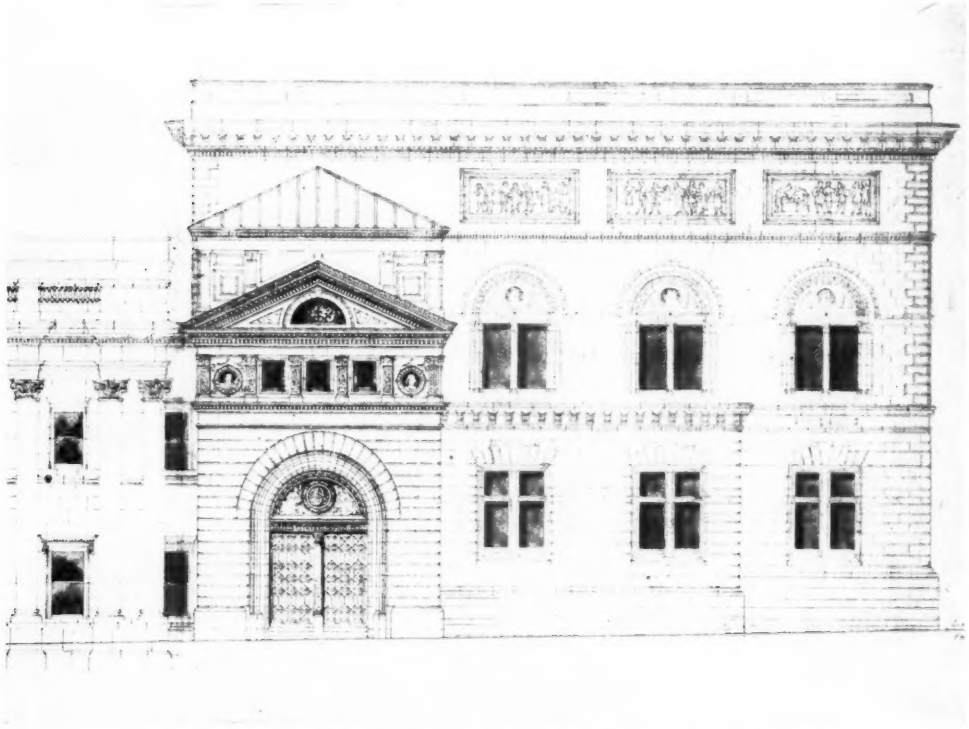
The 15th day of February 1895 was cold and gloomy, a hard frost had continued for several weeks. Mr. Christian travelled to Holloway to make a survey of a new church, and after an interview with the vicar and the architect he proceeded to his own office. Here he received a deputation from the parish of St. Dionis, Parson's Green, in the matter of the completion of the tower, which had been left unfinished when the church was erected; then followed a busy afternoon with reports, accounts, and letters. The next day he caught a severe chill which resulted in erysipelas, and unconsciousness soon followed. In this condition he remained until the following Thursday (21st) when he passed away very quietly. The funeral service took place four days later at Hampstead Cemetery, and was attended by a very large gathering, consisting not only of personal friends but also of many members of his profession, including the President, Vice-Presidents, and several other members of the Institute.

Mr. Alfred Waterhouse, writing to Mr. J. H Christian, said: "No man of our profession was more honoured, looked up to, and loved . . . no one's enthusiasm ever kept pace with his years like your cousin's." This enthusiasm was, indeed, the keynote to Mr. Christian's temperament, and being supported by careful study and tempered by a well-balanced faculty of judgment it could not fail to be an incentive to diligent work in the office and a source of very real enjoyment during recreation; his appreciation not being limited to any one style or school in art or to any one class of beauty in Nature, his enthusiasm was evoked alike by the archaic Doric temple of Pæstum or the palaces of

Genoa, a rugged Welsh church tower or a graceful campanile, a tiny village church or the ruins of Rivaulx Abbey, which he called "the Queen of the North," an English lane or the Gulf of Salerno, an undulating Sussex down or a rugged Alpine peak, and the same impartiality ruled in all other matters, whatever was good and great, noble or beautiful, was sure to secure his approval wherever it was found.

Strangers sometimes formed a very erroneous opinion of Mr. Christian's disposition owing to the kindly goodwill, easily recognised by all but the most unsympathetic and superficial natures. This was well expressed by Mr. George Richmond, R.A., who testified to his satisfaction with the manner in which the restoration of the old Porch House at Potterne had been conducted by presenting Mrs. Christian with a sketch-portrait of her husband, in which the artist said that he had endeavoured to express "the grace and sweetness" of his model.

For recreation he needed very little beyond that afforded by his frequent journeys in the course of



NATIONAL PORTRAIT GALLERY. PART OF ORIGINAL EAST ELEVATION. EWAN CHRISTIAN, ARCHITECT.

terse and abrupt manner in which he often spoke when conversing on matters of business, and some people thought him opinionated because of the positive and forcible manner in which he was wont to state his views on any subject under discussion; this was, however, far from being the case, he was positive only because he was conscious that his opinion was the result of a ripe experience, and often also of a special study of the question, which made him feel very sure of his ground, and in the rare instances in which his view proved to be mistaken no one could be more ready than he was handsomely to acknowledge the fact. Beneath the brusque surface manner was always the undercurrent of business and by his annual holidays usually spent in travel abroad. He was a diligent reader of works of a serious and thoughtful tendency, numbering among his favourite authors Francis Bacon and George Herbert. His Sundays were always kept entirely free from business cares, and whenever possible he arranged his circuits so as to allow of returning home at the end of each week in order to avoid absence from his post in the Sunday school, where he laboured first as teacher and afterwards as superintendent for thirty-five years. Probably, his only hobby in the ordinary sense of the word was the somewhat unusual one of measuring ancient yew trees in order to estimate

their age, and when staying in the country he often surprised his host by undertaking a long walk, sometimes after or before a hard day's work, on hearing of a specimen reputed to be of venerable age.

The list of Mr. Christian's works given in the appendix would form a very reputable record of the labour of a long and strenuous life, but it is only a selection. The record at the time of his decease is approximately as follows :—

New churches	90
Restoration of churches	400
Restoration of chancels for the Ecclesiastical Commissioners	880
Parochial and mission halls	10
Episcopal and capitular residences	40
Clergy houses	380
Schools	80
Private residences	120
Commercial buildings	20
Other works	20
	2.040

In addition to the above there were, of course, many cases in which drawings were prepared for works which were not carried out. There were also 14 surveys and reports on cathedral fabrics, 54 surveys and reports on the City churches, many competition adjudications, including those for Edinburgh and Liverpool Cathedrals and the Admiralty and War Office ; and a large number of reports on the plans submitted for the approval of the Ecclesiastical Commissioners, probably amounting to over 9,000. The labour involved in the examination of these drawings was greatly increased by the circumstance, which Mr. Christian took pains to make known as widely as possible, that he was willing to make a preliminary examination while they were in pencil so that any necessary modifications could be made before they were inked in and tinted, an arrangement which was much appreciated and very generally taken advantage of.

It is obvious that such an amount of work could not have been effected, even by the most diligent application, unless aided by careful organisation and economy of time. These considerations were especially observed in the arrangement of the numerous journeys necessitated not only by his own practice but also by the surveys of churches, clergy houses, &c., for which grants were made by the Ecclesiastical Commission and Lichfield Diocesan Society. A group of cases was selected so situated that they could be visited in succession, and arrivals and departures from each place were accurately timed to allow of ample but not excessive time for the work required, and the railway journeys were utilised for drafting reports or specifications and for the examination of specifications on which he had to report. He had a quick apprehension of the conditions involved by the special circumstances of each commission entrusted to his care, and great skill in evolving a plan which satisfied them. He would begin by taking any piece of paper which came to hand and sketching on it the first rough idea of plan and elevation very faintly in pencil ; alterations and amendments followed rapidly until the result appeared an unintelligible confusion of crossing lines, but all the time the idea was taking form in his mind, and when at last the initial difficulties were mastered he laid aside the pencil and with a quill-pen cleared out the correct lines and added the principal dimensions. The scheme was then ready to be plotted out by an assistant to scale, but every subsequent stage of the drawings was carefully watched over and superintended. It has already been mentioned that Mr. Christian's appreciation of good architecture was not limited to any particular style, and the same may be said of his design. Wherever he had a free hand in this respect he chose the style which appeared to him best suited for the purpose of the proposed building ; and so well was his mind stored by wide study of good examples that whatever style was selected it was correctly and ably rendered. In the great number of works of restoration in which he was engaged this power was especially valuable. He was unusually resourceful in the matter of planning, whether it was a question of designing a new building for difficult requirements or an awkward site, or of remodelling an existing structure. A good example of the latter case was afforded by his treatment of Burcote House which he enlarged for the Dowager Countess of Crawford. The old house, which had been the residence of Jabez Balfour, had an unusually confused plan, and the internal arrangements were unworkable and mean in appearance. After the alterations were carried out the plan became simple and the effect dignified, owing mainly to a spacious corridor ingeniously formed right through the labyrinth of old passages, with much less disturbance of old work than anyone would suppose from its appearance, which suggests that the whole of this portion of the house must have been entirely rebuilt.

The keynote of Mr. Christian's plan was always the introduction of the maximum amount of sunlight, a point to which he had always attached the first importance, though in the early years of his work its value was not so generally allowed as at present. He delighted in providing what he called a " sun-trap," some projecting bay or window in a canted angle to admit a few rays into a room which without it would, from its aspect, have been deprived of them, and whenever possible arranged that every room should receive direct sunlight during some part of the day. The two other principal conditions which ruled his design were sound construction and suitability for the intended purpose. In a recent conversation with the vicar of a poor South London parish which was saddled with a lofty imposing church, rather unworkable and costly to keep up, he referred to a neighbouring mission church built by Mr. Christian, which was

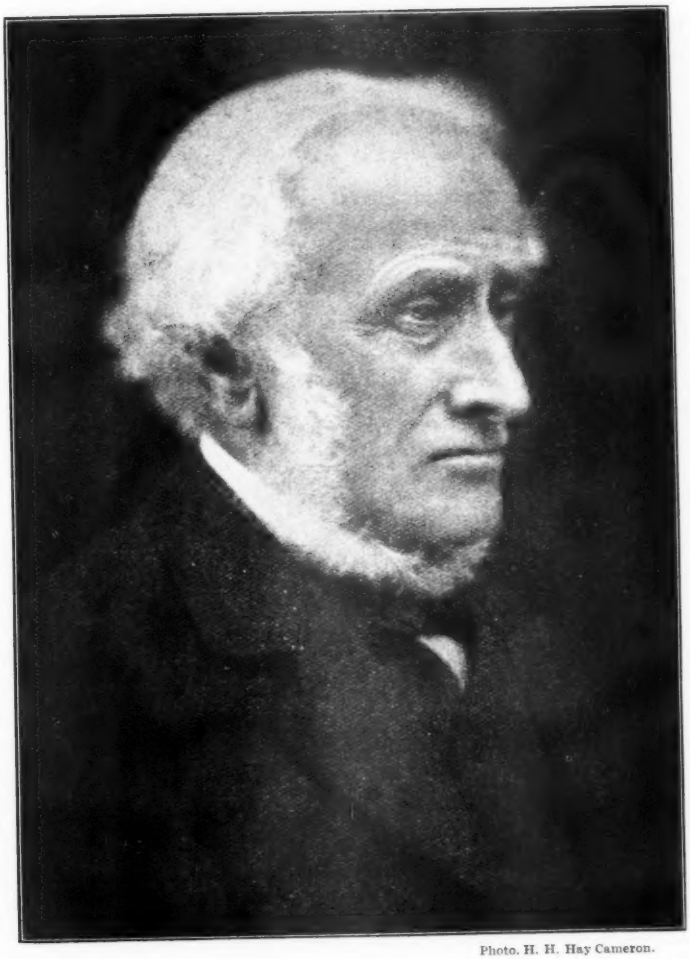


Photo. H. H. Hay Cameron.

Faithfully yours
Ewan Christian

of simple design and modest height, and said, "If only we had a church like that all would be well."

Even apart from economical considerations Mr. Christian had a decided preference for simplicity, though he realised that it would not always satisfy clients' wishes. When one of his assistants had set up the elevation of the large and almost featureless tower of a Welsh church which was about to be restored, he commented on the grand effect of the tower itself, but added that the elevation was not calculated to carry off the premium in a modern competition. In a letter written during a holiday tour, in describing Verona he wrote: "The great church of San Zeno has a grand tall tower of brick and marble, which was more than one hundred years in building; in the lower part it is quite plain, but at the top it has two tiers of belfry windows and a fine projecting cornice. There are two such towers in the city, the other being at the Municipal buildings, and more than 300 feet high. I can fancy what a fuss would be made in our country if an architect were to go on building quite plain for over 200 feet before he put in any ornament, except quite at the base; people would say, 'How bare and ugly it is!' and yet these great architects knew what they were about, and everybody allows that the result is beautiful. They look so grand and dignified. I delight in them."

Mr. Christian united to the artistic and practical faculties an uncommonly able business capacity and a courteous painstaking devotion to his clients' interests which enabled him to preserve the most cordial relations with clients of very varied and opposite shades of opinion in religion and politics, but without sacrificing in the slightest degree his independent position and personal convictions. His feeling of responsibility for every detail in the carrying out of his work would be regarded by many architects as almost quixotic; if a builder shirked his duty in respect of making good defects arising from a blunder or scamping, Mr. Christian would engage a more reliable firm to put matters right at his own expense, and in at least one case when an unreasonable client had continued his demands and complaints until the contractor refused to do any more for him, Mr. Christian sent to his client a cheque for a considerable sum with a request that he would use it in having the work altered to his own satisfaction, and trusting to his honour as a gentleman that it should be applied to this purpose only. But, happily, dissatisfied clients were few in proportion, and expressions of gratitude far more usual than complaints. A gentleman writing some fifteen years after the completion of his own residence, referring to a friend whom he had recently introduced as a client, said, "R —— seems to have taken to you very kindly, and personal confidence is a great point in the relations which I hope are going to be established between you—I felt sure he would. I like my own house as much as possible; it is as pretty as if it were not comfortable, and as comfortable as if it were not pretty; and the two together is all one wants—except an occasional visit from the architect."

To all who worked in his office Mr. Christian was a true friend, ever ready to help or advise in any difficulty or to sympathise in any trouble. To the juniors he was always ready to give the benefit of his experience and would tell them how best to study, to measure old work, arrange a holiday, or preserve their health, and tell it in such a terse emphatic way that his advice was seldom forgotten. To those who had passed beyond the student stage he was most kind and considerate in affording facilities for carrying out any work on their own account which they might secure. It was for many years Mr. Christian's custom to attend service at Westminster Abbey on the morning of New Year's Day, accompanied by all the members of his staff, and on the same evening to entertain them at dinner at his residence. The social function was discontinued owing to several circumstances, but the visits to the Abbey were continued to the last.

In conclusion, I wish to express my sincere thanks to Mrs. and Miss Christian for their kind assistance and for supplying some of the illustrations; to Mr. Gaymer for photographs of some of Mr. Christian's houses; and to those from whose letters I have made extracts in the course of this memoir.

LIST OF PRINCIPAL WORKS.

1841. Marylebone Savings Bank.
1843. Church of St. John, Hildenborough, Kent.
House in Wigmore Street, W.
1844. Restoration, St. Nicholas' Church, Austrey, Warwickshire.
1845. Vicarage at Preston, Lancs.
1846. Church of St. Thomas, Douglas, Isle of Man.
1847. Commercial Bank, Douglas, Isle of Man.
Almshouses, Sapcote, Leicester.
1848. Restoration, Church of St. Mary, Scarborough.
1849. Church, Bishops Wickham, Essex.
Church of St. Bartholomew, Roby, Lancs.
1850. Church at Laxey, Isle of Man.
1851. Church of St. Stephen, Tunbridge.
Church of St. John, Kenilworth.
Church of Holy Trinity, Oakengates, Salop.
Church of St. Maughold, Maughold, Isle of Man.
Restoration, Church of St. Peter, Coggershall.
1852. Restoration, Church of St. Peter, Wolverhampton, commenced.
1853. Restoration of Carlisle Cathedral, commenced.
Christ Church, Forest Hill, Kent.
1854. Church of St. Luke, Marylebone.
Church of St. James, Leyland, Lancs.
1855. Church of St. Luke, Tiptree Heath, Essex.
English Church at Chamouni.
1856. Carlisle Canonry.
St. Asaph's Canonry.
Picture Gallery, Gopsall Hall, for Earl Howe.
1857. Restoration of Southwell Minster, commenced.
1858. Norwich Palace (partial Rebuilding).
Llandaff Palace Chapel.
Church of St. Peter, Rochester.
Church of St. Peter, Hamsey, Sussex.

1859. Llandaff Canonry.
Church of St. John Baptist, Kingston Vale, Surrey.
Christ Church, Winchester.
Restoration, Church of St. Mary the Virgin, Horncastle.
1860. Gloucester Palace.
Church and Vicarage of St. Stephen, Spitalfields.
Church of St. James, Tunbridge Wells.
Church of St. Paul, Swanley, Kent.
Restoration, St. Peter's, Monk Soham, Suffolk.
1861. The Deanery, Llandaff.
English Church, Carlsbad.
1862. Church of Holy Trinity, Little Amwell, Herts.
English Church at Homburg.
Restoration, Church of St. Mary Magdalen, Eardisley, Hereford.
Restoration, Church of St. Mary the Virgin, Market Lavington, Wilts.
Loughrigg Brow, Ambleside, House for Canon Bell.
1863. Bishopthorpe Palace (Additions).
Restoration, Church of Holy Trinity, Bosham, Sussex.
Restoration, Church of St. Sampson, Cricklade, Wilts.
Restoration, Church of St. Clement, Fiskerton, Lincoln.
Restoration, Church of St. Leonard, Hythe, Kent.
Restoration, Church of St. Mildred, Tenterden, Kent.
1864. Bangor Canonry.
Church of Holy Trinity, Lyonsdown, Herts.
Church of St. Paul, Tongham, Surrey.
Church of St. Andrew, Farnham, Surrey (Restoration of Tower).
Restoration, Church of St. Mary, Kempsey, Worcester.
Restoration, Church of St. Mary, Little Brickhill, Bucks.
Restoration, Church of All Saints, Hoby, Leicester.
East Lavington Manor, for Right Hon. E. P. Bouverie.
1865. Church of All Saints, Viney Hill, Gloucester.
Restoration, Church of St. Mary, Cheltenham.
House for Sir F. Grey, Sunningdale.
House for Sir John Shaw-Lefevre, Ascot Wood.
1866. Church of St. John Evangelist, Castleside, Durham.
Church of Holy Trinity, Folkestone.
Church of All Saints, Tilford, Surrey.
Restoration, Church of St. Margaret-at-Cliffe, Kent.
Restoration, Church of St. Patrick, Patrington, York.
Restoration, Romsey Abbey.
Restoration, Church of St. Mary Magdalen, Thorington, Essex.
Restoration, Church of All Saints, West Camel, Somerset.
Abbots Wood, Gloucester, for A. Sartoris, Esq.
1867. Greenfield Church, Holywell.
Church of the Ascension, Melton Ross, Lincoln.
Christ Church, Stoke-next-Guildford, Surrey.
Restoration, Church of St. Thomas, Stanhope, Durham.
Restoration, Church of St. Peter-ad-Vincula, Wisborough Green, Sussex.
Restoration, Church at Upton, Notts.
1868. Church of St. Mary, Carlisle.
Restoration, Church of St. Mary, Eastbourne.
Restoration, Church of All Saints, East Meon, Hants.
"The Armory," Southwark, for Messrs. McCorquodale & Co.
1869. Christ Church, Gedney Drove End, Lincoln.
Church of St. John the Evangelist, Langrish, Hants.
Restoration, Church of SS. Mary and Eanswith, Folkestone.
Restoration, Church of St. Faith, Kilsby, Northants.
Restoration, Church of St. Tyver, Lamphey, Pembroke.
Restoration, Church of All Saints, Terrington, Yorks.
1870. Exeter Canonry.
Restoration of Lollards and Morton Towers, Lambeth Palace.
Church of Holy Trinity, High Hurst Wood, Sussex.
Church and Vicarage, St. Mark, Leicester.
Restoration, Church of All Saints, Holbeach, Lincoln.
Restoration, Church of St. Peter, Hackness, Yorks.
Restoration, Church of St. Mary the Virgin, Portbury, Somerset.
Restoration, Church of SS. Peter and Paul, Sturton-en-le-Steeple, Notts.
Mayfield, for Lord Penzance.
1871. Church of St. James, Coundon, Durham.
Church of St. Benet, Stepney.
Christ Church, Weymouth (Melcombe Regis).
Church at Murrow, Cambridge.
Restoration, Church of St. Mary the Virgin, Potterne, Wilts.
Restoration, Church of St. Mary the Virgin, Prittlewell, Essex.
Restoration, Church of St. Mary, Swine, Yorks.
Rebuilding Church of St. Michael, Rocester, Staffs. (retaining Ancient Tower).
1872. Manchester Palace, Chapel, Examination Rooms, and Gateway.
Church and Vicarage of All Hallows, Bow Common, Bromley, E.
Church of St. Werburgh, Hoo, Kent.
Church of All Saints, Orpington, Kent.
Church of St. John Baptist, Paignton, Devon.
Economic Assurance Office, Blackfriars.
"The Highlands," Gloucester, for Mrs. Frith.
1873. Upnor School Chapel.
Restoration, Parish Church, Horning, Norfolk.
Industrial Dwellings, Barretts Court, Marylebone.
Schools, St. Mark's, Leicester.
Restoration of Porch House, Potterne, for G. Richmond, Esq., R.A.
1874. Church of St. Paul, Clerkenwell.
Restoration, Church of St. James, Castle Acre, Norfolk.
Restoration, Church of St. Michael, Heighington, Durham.
Restoration, Church of St. Lawrence, Norwell, Notts.
Remodelling Church of St. James, Kennington, S.E.
St. John's College, Highbury, Dining Hall.
1875. Christ Church, Stepney.
Church of Holy Trinity, Sunk Island, Yorks.
Chapel-of-Ease (St. Saviour), Tunbridge.
Restoration, Church of St. Andrew Undershaft, E.C.
Restoration, Church of SS. Mary and Nicholas, Leatherhead.
Restoration, Church of All Saints, Sandon, Herts.
Restoration, Church of St. Mary the Virgin, Wethersfield, Essex.
Restoration, Church of St. Nicholas, Dersingham, Norfolk.
Restoration, Church of St. Mary, Westmill, Herts.
Church of St. John Baptist, Windlesham, Surrey (New Church, retaining Old Church as South Aisle).
1876. Church of St. John the Evangelist, Deepcar, Yorks.
Church of Holy Trinity, Scarborough.
Restoration of Church of SS. Peter and Paul, Alconbury, Hunts.
Restoration of Church of St. Bartholomew, Much Marcle, Hereford.
Restoration and Enlargement, Church of St. Barnabas, Swanmore, Hants.

1877. Church of St. Matthew, Cheltenham.
Church of Holy Trinity, Dalston, N.E.
Church of St. Antholin, Nunhead, S.E.
Restoration, Church of St. Mary, Brampton, Hunts.
Restoration, Church of St. Mary, Kempley, Glo'ster.
Restoration, Church of SS. Peter and Paul, Tunbridge.

1878. Minor Canonries, St. Paul's.
Chapel, Selsdon Park (Bishop of Rochester).
Church of St. Mark, Holbeach Marsh, Lincoln.
Church of Holy Trinity, Lamorbey, Kent.
Church of St. Antholin, Stepney, E.
Restoration, Church of the Holy Rood, Holybourne, Hants.
Restoration, Church of St. Mary, Raskelf, Yorks.
Restoration, Church of St. James, Ruscombe, Berks.
Restoration, Church of St. Nicholas, Sevenoaks.
Restoration, Church of St. Mary, Upleadon, Glos.
Restoration, Church of St. Cuthbert, Wells.
Broadwell, Stow-in-the-Wold, for Mr. Piers Thursby.

1879. Church of All Hallows, Poplar.
Restoration, Church of St. Dunstan, Canterbury.
Restoration, Church of St. Peter, Pitton, Wilts.
Restoration, Church of All Saints, Wouldham, Kent.

1880. Salisbury Deanery (Alterations).
Restoration, Church of St. Lawrence, Foxton, Cambridge.
Restoration, Church of St. Mary, Minster-in-Sheppey.
Restoration, Church of Holy Trinity, Poynings, Sussex.
Restoration, Church of King Charles, Tunbridge Wells.

1881. Church of St. Stephen, Upper Holloway, N.
Christ Church, Hampstead (Enlargement).
Restoration, Church of St. Andrew, Oving, Sussex.
School at Folkestone, for the Rev. A. L. Hussey.
St. Andrew's Convalescent Home, Folkestone.
Lillingstone Dayrell House, for A. J. Roberts, Esq.
House at Woldingfold, for C. B. Godman, Esq.

1882. Chapel at St. John's College, Highbury.
Restoration, Church of St. John Baptist, Chaceley, Worcester.
Restoration, Church of St. Peter, Duxford, Cambridge.
Restoration, The Oaks Church, Leicestershire.
Restoration, Skelton Church, York.
Offices of "Whitaker's," Warwick Lane, E.C.
Holbrook Hall, Suffolk, for Jas. Mitchell, Esq.

1883. Church of St. Peter, Limehouse.
Restoration, Church of St. Nicholas, Hail Weston, Hants.
Restoration, Church of Holy Trinity, Llanddew, Brecon.
Restoration, Church of St. Mary, Westwell, Kent.
St. John's College, Highbury, Gatehouse.

1884. Church of St. Barnabas, Kentish Town.
Church of St. Dionis, Parson's Green, Fulham.
Restoration, Church of St. Michael, Halam, Notts.
Restoration, Church of St. Cuthbert, Kirkby-in-Furness.
Restoration, Church of St. Mary, Haverfordwest.
Restoration, Church of St. Andrew, Tilmanstone, Kent.
Restoration, Church of St. Mary, Woodnesborough, Kent.
Restoration, Church of St. Michael, Wilmington, Kent.
Restoration, Church of St. John Baptist in Bedwardine, Worcester.
Castle Malwood, for Sir W. V. Harcourt.

1885. Liverpool Palace (Additions).
Church of St. Paul, Longridge, Lancs.
Restoration, Church of St. George, Arreton, Isle of Wight.
Restoration, Parish Church, Bishopstone, Sussex.
Restoration, Church of St. George of Tombland, Norwich.
Messrs. Cox's Bank, Charing Cross.
Worcester Cathedral School and Restoration of the Ancient Refectory in connection.

1886. Lincoln Palace (partial Rebuilding).
Church of St. Thomas, Heigham, Norwich.
Church of St. George, Netherfield, Notts.
Restoration, Parish Church, Hemel Hempstead.
Restoration, Church of St. Mary, Tansor, Northants.
Restoration, Church of St. John Baptist, Tisbury.
Reseating, Church of Holy Trinity, Marylebone.
Woodbastwick House, Norfolk, for A. Cator, Esq.

1887. Restoration, Church of St. Peter, Inkberrow, Worcester.
Restoration, Church of St. Mary, Nonington, Kent.
Restoration, Church of St. Bartholomew, Tong, Salop.

1888. Chapel, St. Andrew's Convalescent Home, Folkestone.
Church of St. Thomas, Finsbury Park.
Church of St. Mary Magdalen, Harlow, Essex.
Church of Peaslake, Surrey.
St. John's College (Cambridge) Mission, Lady Margaret Church, Clergy House, and Hall, Walworth.
Restoration, Church of SS. Anne and Agnes, Gresham Street, E.C.
Restoration, Church of St. Margaret, Darenth, Kent.
Restoration, Church of St. Mary-in-the-Castle, Hastings.
Restoration, Church of Yaverland, Isle of Wight.
Convalescent Home, Seaford.

1889. Lichfield Palace (Additions).
Church of the Martyrs, Leicester.
Restoration, Church of St. Mary Woolnoth, E.C.
Hotel, Saunton Sands, Devonshire.

1890. National Portrait Gallery.
Restoration, SS. Peter and Paul, Cudham, Kent.

1891. Westminster Choir House.
Restoration, All Saints', Cottenham, Cambs.
Restoration, St. Michael's, Micklcham, Surrey.
Restoration of Tower, Church of St. Tibieu, Llandebie, Carmarthen.
Restoration of Old Chapel, Dulwich College.

1892. Church, Curbridge, Hants.
Bishopthorpe Palace, York, Restoration of Chapel.
Restoration, Church of St. Martin Ludgate, E.C.
Restoration, Church of St. John Baptist, Stanbridge, Beds.
Restoration, Church of St. Mary, Willesden.

1893. Church at Ballasalla, Isle of Man.
Church of St. Olave, Stoke Newington, N.
Restoration of Tower, Church of St. George, Newcastle-under-Lyme, Staffs.
Church of St. Mary, Cowes (Deep Underpinning).

1894. Church at Cheriton, Kent.
Church at Lock's Heath, Hants.
Church at Sleights, Yorks.
Church of St. Paul, Woking.
Restoration, Church of St. Michael Paternoster Royal, E.C.
Restoration, Church of St. Mary, Whitfield, Kent.
Restoration, Canon's Gateway, Chichester.
Burcote House, Oxon., Enlargement for the Dowager Countess of Crawford.

REVIEWS.

ENGLISH DOMESTIC ARCHITECTURE.

English House Design: a Review. Being a Selection and Brief Analysis of some of the Best Achievements in English Domestic Architecture from the 16th to the 20th century. By Ernest Willmott [F.] La. 8o. Lond. 1911. *Price* 10*s.* 6*d. net.* [*B. T. Batsford*, 94 *High Holborn, W.C.*]

Of the making of books on English domestic architecture there appears to be no end. The latest, or at any rate one of the latest, to appear is "English House Design," by Ernest Willmott. The author at the outset disarms criticism from the point of view of the architect by stating that the book is intended for those who are not familiar with, or do not possess, the architects' library, but whose interest in the subject rouses a desire to learn more about it. From this standpoint the work is well adapted for its purpose, indicating as it does the result to be aimed at and, in some instances, to be avoided.

After considering the treatment of the house in relation to its site, the author proceeds to lay down some general rules concerning the principles of house design, to trace the development of the old English house, and finally to apply the general principles to the examples selected for illustration.

In connection with the question of the setting of the house, one may perhaps be allowed, in passing, to express a regret that the ugly expression "lay out" should occur with such frequent reiteration.

The illustrations, which cover a wide range, are in many instances reproductions from other works of a similar nature and are generally well chosen.

While such examples are left to us from the past, and while such modern work as is here depicted is being produced, one cannot but feel that the outlook in regard to English domestic architecture is a hopeful one. HERBERT PASSMORE [*A.*].

THE ENGLISH STAIRCASE.

The English Staircase: an Historical Account of its Characteristic Types to the End of the Eighteenth Century. By Walter H. Godfrey. Sm. 4o. Lond. 1911. *Price* 18*s.* [*B. T. Batsford*, 94 *High Holborn, W.C.*]

It must always be difficult to take a portion of what is essentially an indivisible whole and make of it a whole sufficient unto itself. This is the task Mr. Godfrey has set himself in "The English Staircase," and it will be admitted by all who are acquainted with the subject in any degree that he has accomplished this task with a full measure of success. As the author remarks, the staircase is necessarily the key to the planning of a large part of the house: indeed, he might have improved upon this by calling the staircase the newel of the house, for the word is but the French "noyau"—the stone or core of a fruit—under a thin disguise.

This being so it is almost a pity that he does not give us a fuller account of the evolution of the staircase, or rather of the changes in planning which separate the now demolished Buckhurst Place with its three well-staircases, five turret-stairs, and any number of apparently disconnected flights, from the typical Elizabethan mansion in which the whole art of the staircase builder has been concentrated upon one sublime effort. But considered as a collection of the finest examples to be found in England and Scotland, the book is deserving of all praise, and reflects credit upon author and publisher alike, who have evidently spared nothing in their desire to make the examples representative of all that is best. The quality of the illustrations is such as we have learnt to expect in books bearing Mr. Batsford's name at the foot of the title-page.

ROBERT W. CARDEN [*A.*].

ARCHITECTURE AND THE STAGE.

An Exhibition of some Drawings and Models for "Macbeth" and other Plays by Edward Gordon Craig at the Leicester Galleries, September 1911.

IF an architect were asked whether he thought that he was able to prepare sketches for stage scenery, the chances are that he would reply in the affirmative. He would have no doubt that he could suggest something that would be better than much of the scenery that is in general use. Certainly, if it were a matter of architectural setting of historical interest, he would approach the task with gladness and without misgiving. He would, at least, make a very good attempt to design a garden set, although he might not feel equal to the representation of a landscape. In fact, the mental equipment of an architect is such that he should be able to produce, for many of the scenes of most plays, drawings and models which would have excellent qualities. They would be based upon clearly conceived plans; they would be structurally reasonable; their arrangement would comply with the limitations and requirements of the stage; a sense of actual human scale would be maintained; in colour scheme they would not be bad, and they might be good; their perspective would be true, and their architectural masses, features, and details would be strongly characteristic of the period and locality to which they belonged. With such qualities, if they did not inspire, they would certainly convince.

It is not implied that architects should become scene-painters, but it is presumed that they are particularly interested in the great advance which has been made in the design of stage scenery during recent years in London and that they will welcome further progress. To Mr. E. Gordon Craig, the son of an architect, they look for a definite lead in the right direction, and they are well qualified to be members of the discerning and discriminating public to which his efforts are addressed.

As was to be expected, a talent for abstract composition is shown beyond doubt by the work at Mr. Craig's exhibition. His relative tone values and his suggestion of mystery are wonderfully good.

His colour is delightful. In each of his designs he has avoided superfluous elements which would distract attention from the characters of the drama, and there is in them a balance of strength and delicacy that is charming. Both drawings and models are placed so as to be shown to advantage.

It may be doubted, however, whether his work, as a whole, is successful. What is the function of the scene painter? What is the use of scenery? It is not really necessary to the delivery of an author's writings; but the author and the player will avail themselves of scenery (if it is available) as readily as they will adopt the use of costumes and make-up. The make-up will help the player to express the age and character which the author intended, the costumes will help to indicate quality and calling, and the scenery will help to represent surroundings, while together they will help to establish time and place. So far as they help the story, they will be good, and the function of the designer of scenery is thus to help the story.

As the curtain is rung up, a scene may be disclosed which will give the spectators many ideas with which the action of the play is concerned—a scene which will put them into a frame of mind that will enable them the better to understand that which is to occur and will keep them reminded of circumstances which influence the plot. Some of Mr. Craig's drawings do not indicate scenes which would do anything of the kind. On the contrary, they would puzzle all observers and drive them in perplexity, or in a spirit of controversy, to repeated reference to the printed programme in search of some guidance as to where on earth or elsewhere the scenes were to be supposed to be. It is not apparent, on examining one of his studies, whether it is intended for Dunsinane or Elsinore, Italy or Egypt. The general impression given by many of them is that they are sketches from S. Gemignano. They are no more than sketches, and it is not clear whether the designer has left his work at that stage as a matter of taste, or on account of an inability to continue without losing more than he could gain. It may be that he has reserved more precise definition and development of his schemes for consideration at a larger scale. In one case he has supplied a detail, but it only serves to enforce the conclusion that something is wanting in Mr. Craig's architecture. There is not exactly a lack of sympathy with architectural expression, but there is an absence of architectural knowledge.

Perhaps the artist has not worked hard enough at the study of architecture, and perhaps he imagines that he can evade the hard work which architecture demands by putting into his compositions walls and towers that are devoid of architectural character—non-committal and therefore quite safe—or by just leaving out buildings altogether. He exhibits a sketch for the Forum scene in "Julius Cæsar," which, in the absence of any evidence to the contrary, might be in the Far East. The catalogue of the exhibition contains notes by Mr. Craig, in explanation and defence of his conceptions. Referring to his Forum scene he writes: "There is no example of Roman architecture here, because I could find none in Shakespeare." Mr. Craig should seek again. Compare his extraordinary assertion in this case with that which refers to "Macbeth," Act 1, sc. 5: "As former stage managers have placed Lady Macbeth in this scene by the side of a fire, which makes things a bit lurid, I thought perhaps people would be glad to get away from that. So I conducted the lady to her bedroom . . . I wonder if I did wrong!" There is certainly no bed in that scene of Shakespeare. Compare the two drawings and it will be seen that the picture of the bedroom clearly depicts a bedroom because there is a bed, but that the picture of the Forum clearly does not depict the Forum because there is no Roman architecture.

To scenery that is helpful, architecture is valuable; on occasion it is indeed essential. It serves as an international code—a beautiful code — whereby geographical, historical, and social facts and the atmosphere which they create may be suggested to an audience. Its value is great and it is growing. The public has acquired, directly and indirectly, by means of photography, travel, guide-books and the like, a general education in the characteristic styles and periods of architecture and in the human conditions from which they arose. A playgoer of "the middle class" (to which class Mr. Craig refers) knows the distinguishing features of architecture, when he sees them, and if they are wrongly presented or omitted he knows that also. It will not do to represent to him a Scotch castle having a modern French plan. Of course, he may not be able to make architectural and archæological compositions for the stage; that is a problem for the designer of stage scenery. Mr. Craig has not solved that problem, he has disregarded it.

He has disregarded, too, an important fact that applies to the modern stage. It is this, that a set of scenery which is intended to occupy the whole width of a stage must form a horizontal composition. The tendency to-day in the design of theatres is to arrange for a maximum width for the stage. Depth can be painted, and height is restricted on the grounds of economy, convenience, and safety. Again, the part of the scene which counts—whatever may be the form and proportion of the proscenium arch—the part which is visible from every seat in the house—is a horizontal strip above the footlights. To an artist of Mr. Craig's ability this fact should not be a handicap but simply an initial direction, yet the greater number of the designs exhibited have a vertical feeling, and their effect depends upon their verticality. The exhibitor admits in his note to his first exhibit that "you cannot get such a height on the actual stage—in London." To make a design the principal dimension of which renders it useless for

the space which it is intended to fill, surely does no good, and to blame the theatres of London does not mend matters. Such work cannot be seriously considered as practical design. Viewed as an upright decorative panel, it is very nice, but as it is not intended as such, it fails. The bedroom scene above mentioned is composed in the vertical sense, but in that case the shape is reasonable, for it " is designed to take up a very little room on the stage." That is certainly a good device, because a small vertical scene in the middle of the stage would form a fine contrast with horizontal scenes that would be more general, and further it would meet one of the greatest difficulties with which a scenic artist has to contend, namely, that of obtaining a distinction of scale and of actual size between interiors and exteriors.

No ! Mr. Craig's work—with all its cleverness, all its merit—is disappointing to architects. Apparently, he has found out that architecture is a lot more difficult than it looks, and that the simplest architecture, which appears to be the easiest, is the best and is also the most difficult to achieve. He has achieved simplicity, but he has not achieved simple architecture. Simplicity in itself is not enough ; it is only a negative virtue.

J. Nixon Horsfield [*A.*].

ARCHITECTS AND THE GARDEN.

EACH generation has to face the difficulty of making the English home more charming than it was before. The nearest approach to a paradise on earth, Sir Aston Webb once remarked, is a beautiful garden on a beautiful day. Yet the most beautiful garden is incomplete without the house, just as a beautiful house—at any rate in the country—is incomplete without its beautiful garden surrounding it. It seems to follow that the producers of the house and the garden should work hand in hand from the commencement. The following is extracted from a very suggestive article on the subject which appeared in *The Times* of the 12th August last :—

There is at the present time some discord between architects and gardeners in the garden. Architects, when they have built a house, like to design a garden to suit it. They have the old Italian notion of a garden, that it is an annexe to the house and should be dominated by it ; and often they have the Italian indifference to flowers. The gardener, who wishes to grow flowers in his garden, suspects the architect of knowing very little about them, and often with good reason. He asks himself whether the architect's plan will suit his horticultural purposes, and he comes to the conclusion it will not. Very likely he wants a rock-garden, which seems to the architect a mere chaos of plants and stones which he cannot fit into any orderly design. Therefore the architect suggests that, if he must have it, he should place it in some out-of-the-way spot which the gardener knows is quite unsuited for the purpose. Or the gardener wants a herbaceous border where soil and aspect are best ; but this is just where the architect wishes a yew hedge to be planted. Hence there is friction between them, and the gardener determines to make his garden in his own way, while the architect goes off feeling that his house is going to be spoilt by incongruous surroundings. He should remember, of course, that the gardener must be allowed to do what he likes with his own, and that he cannot expect an Englishman to have Italian ideas ; but at the same time it is a pity that there should be this difference between the artist's notion of a garden and the gardener's, for the result is that some of our gardens are chaotic and others are too ostentatiously artistic. They look as if they had been designed according to an arbitrary pattern, and as if their owners took no further interest in them.

A garden can only be beautiful if it is at the same time designed to suit the house and also expressive of the natural tastes of its owner. If it is formal only because formal gardens are supposed to be artistic, it is sure to be as dull as the show gardens of the past with their regiments of bedded flowers. In fact, no one can have a beautiful garden unless he has some artistic power of his own. It is the same with gardening as with dress or furniture. It is not enough to have the money to buy fine things, you must also buy them because you like them ; and you must know how to use them so as to express your own taste, otherwise your money will be merely wasted. Therefore the garden of the fanatical horticulturist, if he really enjoys himself in it, is likely, however chaotic, to be less dull than the formal garden which does not express the taste of its owner.

But at the same time it is pretty sure not to be beautiful, for the horticulturist's aim is not to have a beautiful garden but to grow fine or difficult plants ; and the more eager he is the more ready he will be to sacrifice everything to that. His garden is his alone, planned to suit his own particular hobby, which is scientific rather than æsthetic, and not likely to delight or interest any one who does not share that hobby. On the other hand, the idea behind all good garden design is that a garden should be a pleasant place, not merely for horticulturists but for every one ; and formal designs can only be delightful and interesting when they are inspired by this idea. As in every other art, pattern in gardening should always have a meaning, and merely decorative gardening is as unsatisfying as merely decorative painting or versified words without sense. Architects, when they set to work to design gardens, sometimes forget this. They react too violently against the old landscape-garden ideas, which they associate with hideous Middle-Victorian houses ; and they regard the formal garden rather as a protest against a bad kind of art that has gone out of fashion than as a good kind of art which is itself founded on reason and the natural tastes of men.

If we are again to have a formal art of gardening of our own, it must be one that will suit our climate and our tastes. We have a taste for flowers, and we take a wholesome pleasure in growing them well. Therefore our formal gardens must contain plenty of them, and must be planned so that they may be well grown. Formal gardens in England often look desolate because they contain flowers which are not well grown. It is better to have none at all than these. But our taste for flowers as the chief adornment of the garden is rational, since under our grey skies we have to supply the colour which the sun itself affords in Italy. There white palaces and terrace walks gleam among the dark glittering ilexes, with the blue sky as a background for everything. In that blaze of light there is no need for bright local colours ; the sunshine makes them everywhere ; and it reveals its glory best upon broad, evenly-balanced masses of light and shade. But in England, except in

rare summers such as this, we must supply our own local colour in our gardens and design them for grey days as well as sunny. A variety of colours, both in flowers and in foliage, that would look restless and incoherent under an Italian sun is pleasing in England except on the hottest and brightest days, and so is an equal variety of outline and shape. The English landscape itself is not nearly so symmetrical and architectural as the Italian; and English architecture at its best has been designed by a happy instinct to suit the landscape. If then we can design our gardens so as to suit the best of our architecture, we shall not try to imitate wild nature in them, but we shall also fall short of the extreme formality of the Italians. And we shall hit the happy mean only if in designing them we always bear in mind the uses to which we mean to put them. We shall use a yew hedge, for instance, always as a shelter, not as a mere dark line in a pattern, and if we make a shady walk we shall place it where it will lead from one important part of the garden to another. There is a fashion now for pergolas, and often they look very foolish because they are mere frameworks for roses and other climbing plants. A pergola should always be a passage; and if it is an inconvenient passage, being narrow or chippy, it should not exist at all. It is a great convenience in Italy, where people want to avoid the fierce sun even in a walk of a few yards, but in England it is often a mere fad created by the rage for Dorothy Perkins and the Crimson Rambler.

Much of the still persisting prejudice against formal gardens in England has been provoked by its irrationalities. Lately, for instance, we saw in one of the garden papers a protest against yew hedges on the ground that the yew is a fine tree and should not be spoilt by clipping. Certainly it should not, when it is grown as a tree, except in very small gardens where it is clipped to keep it in bounds. But where it is grown as a hedge it must be clipped, if the hedge is not to look untidy and so ugly. No doubt, if the supply of yews were limited, it would be a waste to use them for hedges. But the supply is unlimited except by the demand; and since the yew makes the most beautiful of hedges for garden purposes and the finest background for flowers of all colours, while it also gives an excellent shelter, there is no reason why hedges should not be made of it. But where yews and other trees and shrubs are clipped for no reason except to show that their owner can afford to waste any amount of labour upon them, they look ugly because they look irrational; and this, no doubt, is the cause of the equally irrational prejudice against all clipping. Every one clips box edgings because they are boundary lines and therefore must be regular and confined within a certain space; and clipping is always legitimate where there is a good reason for it. Formality in English gardens is never likely to become excessive where the owners are determined not to waste labour upon useless and mechanical tasks. So the architect in designing a formal garden should always consider how much labour will be required to keep it in order; but this means that he should have some practical knowledge of gardening. It is the divorce between the craft of gardening and the art of garden design which has produced extravagances in both, as it has produced extravagances in architecture and other arts. Any one who would plan a garden well should have a thorough knowledge of the materials which he proposes to employ and a persistent consciousness of the uses to which the garden is to be put. Otherwise he is sure to fall either into pedantry or into mere chaos.

9 Conduit Street, London, W., 30*th Sept.* 1911.

CHRONICLE.

The Protection of National Treasures.

Tattershall Castle, one of the finest examples of mediæval brickwork to be seen in England,* which was built by Lord Treasurer Cromwell about the years 1433–43, has, it is reported, been bought for America, and is in course of being dismantled and moved to the United States, where it will again be erected. The four famous mantelpieces of the Castle, delicate architectural compositions, carved with the heraldic devices of Lord Cromwell and his family, have been grievously mutilated in the process of removal. The fate of this interesting historic relic has aroused considerable public feeling, and the following letter from the President of the Institute appeared in *The Times* of the 21st inst. :—

Sir,—The threatened disaster at Tattershall Castle is a rude reminder of the fact that we have really no machinery in existence for the protection of those national treasures which happen to be in private ownership. Mr. E. Mansel Sympson's letter in your issue of the 20th has the great practical merit of suggesting a businesslike method of securing the protection that is now lacking. The details of his proposal would of course demand careful consideration, but I am confident that the representative body of my own profession, the Royal Institute of British Architects, will lose no time in giving its sympathetic attention to the danger that has been revealed and to the plan which Mr. Mansel Sympson has suggested.

I am, Sir, your faithfully,

Leonard Stokes,
President R.I.B.A.

Mr. Mansel Sympson proposes that the heads of the leading architectural and archæological societies and some members (who are specially interested

* The late Mr. Fred. H. Reed was awarded the Silver Medal of the Institute in 1872 for a very fine series of Measured Drawings of Tattershall Castle and its mantelpieces. These valuable drawings, together with a description of the buildings, were afterwards published in a large folio volume, a copy of which is in the Institute Library. Casts of the mantelpieces are in the South Kensington Museum.

in the subject) of both Houses of Parliament should meet to draw up a private Bill, to be introduced and, if possible, passed by Parliament this year. The Bill, he suggests, should provide (1) that all historical monuments in this country in private possession be scheduled, and (2) that no transaction of buying or selling any of these scheduled monuments be entered into and no structural alterations of them be made without due notice to and approval by the Inspector of Ancient Monuments.

Mr. Robert Hunter, writing from the Office of the National Trust, expresses the hope that the disaster which has befallen Tattershall Castle may supply the motive power necessary to carry a measure through Parliament. What is most urgently needed, he suggests, is a suspensory power vested in some Minister of State accountable to Parliament—say the Home Secretary or the First Commissioner of Works—a power to be exercised on proper representations and to be enforced by the Courts.

Lord Burghclere, Chairman of the Royal Commission on Historical Monuments (England), states that in the Commission's First Report to the King they suggested that the power of dealing with such cases should be vested by legislation in a responsible Minister of the Crown with the assistance of an Advisory Committee.

Birmingham University: Town Planning Lectureship.

A Lectureship in Civic Design and Town Planning has been established in the University of Birmingham. The cost is to be defrayed by the Bournville Village Trust which was founded by Mr. George Cadbury to encourage schemes of betterment and improved housing generally. Mr. Raymond Unwin [*F.*] has accepted the Lectureship for the first year, and will begin his course during the present Session. The Lectureship will at first be associated with the Department of Civil Engineering, where students are trained for civic and municipal service of various kinds; but it is hoped that students in other Faculties, especially those working for diplomas in Social Study, as well as persons interested in architecture and in civic improvement generally, will take advantage of these lectures. Mr. Raymond Unwin will explain his plans for the Session, in an inaugural open lecture at the Medical Theatre of the Mason College Building of the University, on Friday, October 6. The subsequent Lectures will be delivered on Fridays throughout the Winter and Spring Terms, probably at 5 p.m., in the New University Buildings at Edgbaston. For regular students there will be some amount of practical work associated with the course.

School of Art Wood-Carving.

The School of Art Wood-Carving, 39 Thurloe Place, South Kensington, which is under Royal patronage, has been reopened after the usual Summer vacation, and it is announced that some of the free studentships in the Evening Classes maintained by means of funds granted to the school by the London County Council are vacant. The day classes of the school are held from 10 to 1 and 2 to 5 on five days of the week, and from 10 to 1 on Saturdays. The evening class meets on three evenings a week and on Saturday afternoons. Forms of application for the free studentships and any further particulars relating to the school may be obtained from the Secretary.

Obituary.

James Pigott Pritchett (*Fellow* 1863-76, 1906-11) died at "Glendower," Teddington, on the 22nd September, at the age of eighty-one. Born in York on the 14th May 1830, he was educated at St. Peter's School there. After serving his time with his father, the late J. P. Pritchett, of York (who practised as an architect in York for fifty-five years), he joined him in partnership in 1853, and in 1854 succeeded to the practice in Darlington of his brother-in-law—the late John Middleton, who removed to Cheltenham. From 1854 to about 1910 he was engaged in an active general practice, though perhaps he was best known for his ecclesiastical work in the North of England. His son, Mr. H. D. Pritchett, who has been associated with him since about 1880, was taken into partnership in 1900, and is now carrying on the practice. Mr. Pritchett's health began to fail about 1905 and he gradually withdrew more and more from active work, leaving it principally to his son. His works comprise 17 cemeteries, chapels, &c., in various parts of the country, 25 new churches, 20 restorations, and additions to churches, 28 Nonconformist chapels, 16 parsonages, 18 schools and Sunday schools, 4 banks, one large training college at Darlington, 12 offices, hotels and shops, restorations to two castles, over 40 mansions, houses and cottages, and in addition sundry monuments, parish halls, &c., and houses on the Cleveland Estate at Darlington. He was surveyor to this estate under the late Duke of Cleveland, then under the present Lord Barnard, and he and the firm are responsible for a large amount of laying out and development. He was connected with local Archæological Societies, and frequently lectured and gave papers on archæological subjects. His surviving family consists of two sons and three daughters, one of the former and two of the latter being in New Zealand. Mr. Pritchett took a prominent part in the establishment of the Northern Architectural Society.

George Ransome, *Fellow*, who died at Cape Town on 26th November 1910, had been in practice in that city since 1879. Born in 1854 at Selby, Yorkshire, Mr. Ransome served his articles with Mr. J. Macvicar Anderson. He was a pupil at South Kensington, and was elected Associate

of the Institute in 1880, and Fellow in 1906. Going out to the Cape originally at the request of the Government in connection with the Houses of Parliament then being erected in Cape Town, he afterwards entered practice on his own account and designed many important buildings in the city, including offices for the *Cape Times* and *Argus*, business premises for leading merchants, and many churches and residences in the neighbourhood. Of great force of character, Mr. Ransome was of a quiet and retiring nature, and was highly respected by all with whom he came in contact. He was much in request as arbitrator in building disputes. His executed works show considerable variety in design and fine massing allied to excellent planning. Mr. Ransome had a great affection for work of the French Renaissance, and the poetry and feeling expressed in many charming skylines bear witness to effective study and masterly handling.

JOHN DAVIDSON, of Dumfries, recently elected Licentiate of the Institute, died on the 1st September.

Sessional Meetings 1911-1912.—The following changes have to be noted in the Sessional Programme published in the last issue of the JOURNAL: Mr. Statham's paper on Modern French Sculpture will be read on 20th November instead of 19th February, and Mr. Warren's paper on Collegiate Architecture on 19th February instead of 20th November.

Newly-elected Licentiates.—The name of Rajendra Chandra Ghose was wrongly included in the list of newly elected Licentiates published in the JOURNAL for 29th July.

CORRESPONDENCE.

Architects' Responsibilities.

12th Sept. 1911.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The case of the Leicester Board of Guardians *v.* J. E. Trollope, reported in your issue of March last, gives rise to serious thought for all architects.

Apparently, the ruling in this case means that architects can be held responsible *for all time* for defects which may occur in any building they have designed, even when it is clear that the defect was caused by gross neglect or bad workmanship by the builder; and, further, that having granted the "final certificate" the architect, or employer, has no claim whatever against the builder, even if the deceit were deliberately committed.

In the case referred to, the builders, of their own free will (and greatly to their credit), came to the assistance of the architect after the case had been decided against him. But other architects may not be so fortunate in future.

Anyone who has experience in building knows that the architect must trust the builder to a certain extent; and that if the builder really intends to scamp and cheat the architect, there are hundreds of ways in which he can do so with very small risk of being detected.

I am certain that no solicitor or other professional man ever puts himself into such an absurd and dangerous position, and I can see no reason why architects should continue to do so.

The R.I.B.A. Form of Contract was never intended to put architects into this position, and Judges have frequently pointed out the unfairness of the clause as to the responsibility. But the law being as it is they have to rule accordingly.

It is, therefore, high time that counsel's opinion be obtained by the profession with a view to so altering the wording of the contract, or the "final certificate" (or both), as to allow the architect, or employer, to come down on the builder for defective workmanship or materials, even if discovered after the "final certificate" has been granted, provided the defect was one which the builder and not the architect is in fairness responsible for.

From the number of cases fought and lost on this ground by architects, it is evident that we are every day putting ourselves to unlimited risks for the sake of a small and hard-earned fee. The sooner we get into a stronger legal position the better for the profession, and the better work our clients will get from that class of builder who think anything will do so long as it enables them to obtain that fatal "final certificate."—I am, yours truly, DOUGLAS WOOD [*A.*], F.S.I.

The Wrens in Pepys' Diary.

7th Sept. 1911.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I was glad to see Mr. Weaver's letter in the current issue of the JOURNAL. I will not, of course, attempt to dispute (nor do I wish to) respecting the merits of one text or another. All I would point out is that, to my mind, it is always ungenerous to despise the work of a pioneer. I am sure that all lovers of history should warmly acclaim Lord Braybrooke's initial labours; it is always easy to improve upon what has gone before. As a matter of fact, one of the diary entries (I have not the book by me) reads as if Wren and Matt. Wren were two different people, and it was this that prompted me to raise the question. I am sure we shall all welcome a paper by Mr. Weaver on Pepys as an amateur architect; but all the same, members of the profession do not regard as a brother (not even as a lay brother) those who merely pay for having alterations effected upon their property.—Faithfully yours,

PERCY L. MARKS.